

AIRFIX magazine

FEBRUARY 1970

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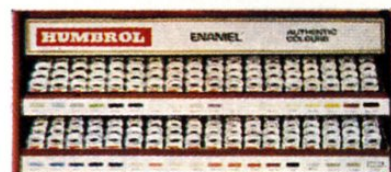
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Bottom left: World War I tank Bottom centre: Leo/Grant tank Top left: 88mm Gun Right: Centurion



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A.21. Staffel A.22. Gruppe 3/9 each

RAF FIN FLASHES

A.23. Besides the fin flashes for 1940-42 and 1942-47 this sheet includes, Prototype, kill, Polish and Czech markings. For February 1st 4/9
S.2. ROYAL NEW ZEALAND AIR FORCE. Contents: Mustang IV of 3 Squadron (post war), Corsair F4U (War-time Pacific markings), Kittyhawk (Fiskens aircraft 'The Wairapa Wildcat'). For February 1st 5/9

IN PREPARATION

T.S.2. Marking for Lee Grant. Contents: Lend Lease, Russian Service, U.S. Training vehicles, British Service North Africa, British Service Burma, U.S. Service Pacific.

NEW FLAGS For February 1st

F.2. AMERICAN CIVIL WAR UNION FLAGS for 20 mm FIGURES

This sheet contains: 20th Maine—2nd Illinois—Artillery

Regimental Standard—Battery Guidons—Cavalry Guidons—11th Iowa—10th Michigan—4th Illinois, Self-Adhesive 4/9
The above is a companion sheet to F.1 American Civil War Flags Confederate 4/9

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AFV 1/76

T.S1. Hauptsturmführer Michel Wittman Tiger Tanks. Contents: Russian Front Kharkov 1943 showing 88 victories recorded on gun barrel, West Front Normandy 1944, with Zimmerit Anti-Magnetic and Sticky mine panels 4/9

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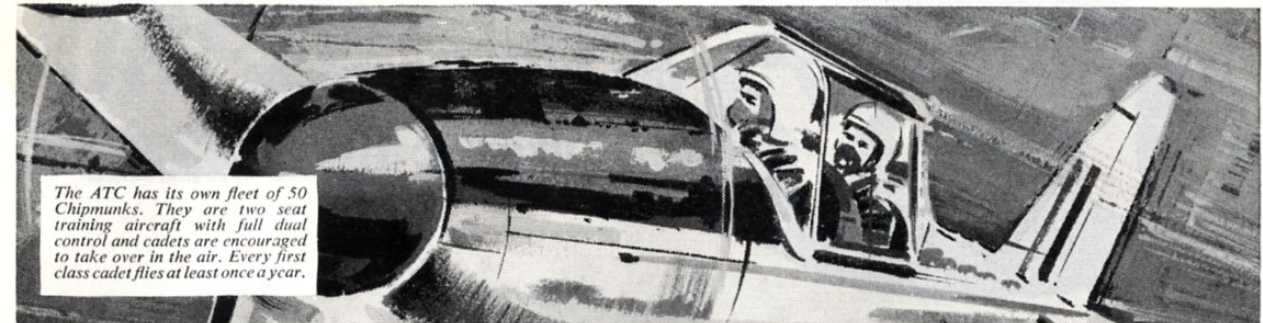
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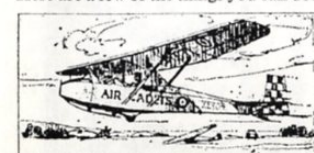
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NOTE: This sheet contains full markings for each machine covered, i.e. National insignia, lettering and numbering, emblems, ejection seat triangles, fuel points, instrument panel, and the camouflage pattern given for "Charlene" is in accord with T.O. 1-1-4. For use with Frog/Hasegawa/AMT kit.



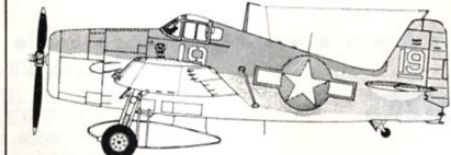
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NOTE: Again, this sheet contains all the markings required to complete the chosen models, including National insignia, Matt finish. For use with Airfix kits.



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AIRFIX magazine FOR PLASTIC MODELLERS

February 1970

Volume 11 No 6

Editor Chris Ellis

Cover Picture

General Sir John Dill, C-in-C Home Forces, using a Crusader Mk I tank as a temporary command vehicle when he was observing a large scale tank exercise held in Southern England in September 1942. The immaculately clean Crusader is finished in dark earth overall and the red/white/red Royal Armoured Corps flash is just visible on the glacis plate. It was also painted on the side stowage boxes towards the rear, and the red portion can just be seen on the extreme left. The hull machine gunner is standing in his auxiliary turret—from which the machine gun has been removed—and the bracket for the spare track shoes is seen above the dustguard. Note the driver's raised hood with two-piece opening flap and vision slits. Close scrutiny of the original transparency shows no visible markings on the vehicle front.

An article and 1:76 scale drawing for making a Crusader model appeared in our September 1968 issue.
(Imperial War Museum)

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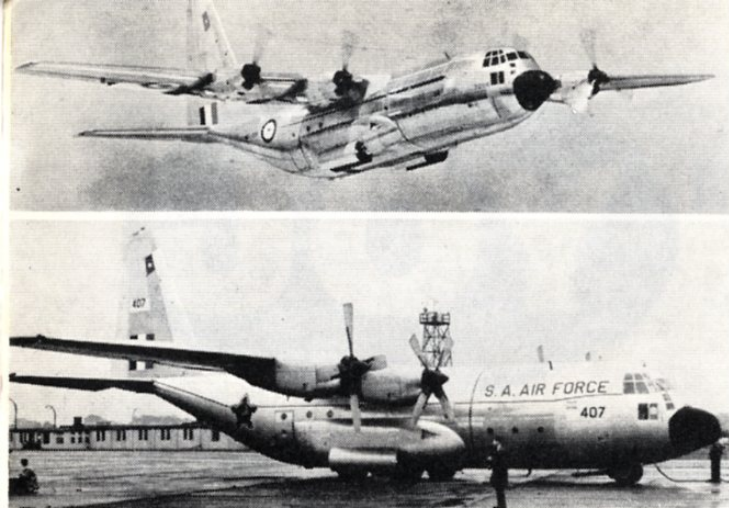
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MEMBER OF THE AUDIT
BUREAU OF CIRCULATIONS



Top: The Hercules serves with the RAAF and this example is shown in natural metal overall finish—an ideal subject for Metalskin treatment in model form—with standard RAAF roundels, blue cheat line, and 'ROYAL AUSTRALIAN AIR FORCE' lettering. Serial is A97-205 with code 3205 on nose. **Above:** SAAF aircraft has white fuselage top but is mainly natural metal. Black walkways are painted on upper surfaces as on our drawing, page 280.

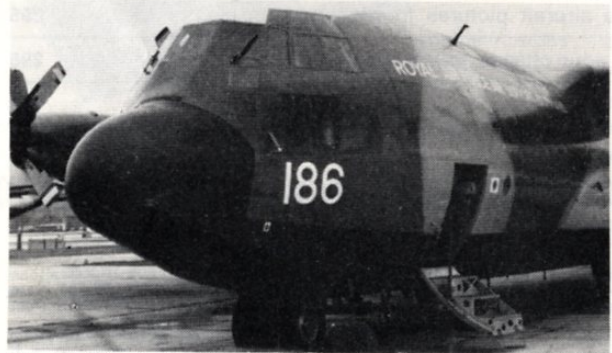
SINCE I saw the first Hercules aircraft enter RAF service at Lyneham in November 1967 it has been used throughout the world, not only in its original tactical role, but as a strategic freighter as well. It would appear that the RAF has brought an aircraft which has replaced the Hastings and Beverley two-fold although the actual numbers—66—are roughly the same. The Hercules does twice the work at twice the range, payload, and speed of its predecessors and has been accepted by the four Squadrons in No 38 Group Air Support Command as being the best work horse that the Command has had since the Dakota.

I went to see some of the activities of the Hercules in this country recently and visited both Lyneham, where all five Hercules Squadrons will eventually settle, and No 242 Operational Conversion Unit at Thorney Island where aircrew fresh from flying training meet up with their new mounts.

Nineteen Week Course

RAF Thorney Island, home of Coastal Command Fortresses, Liberators and Beaufighters in the last war has been used for training aircrew since the mid-fifties. It housed No 2 Air Navigation School before No 242 OCU moved there with Argosy transports. Although the last Argosy has only recently left, two years ago the first of the RAF's Hercules arrived to start crew training.

With the complex nature of the aircraft and the need to have considerable knowledge of world air routes five-man crews are formed when they arrive at the Station. These consist of captain, co-pilot,



Thorney Island Hercules at the Operational Conversion Unit. Note that they all display the three figures of the serial in white under the nose window. No other Hercules in the RAF uses this type of marking under normal circumstances though some may have side numbers for exercise purposes. Note the new red/white/red prop tips, still only half painted on one blade. Further marking notes on page 288.

navigator, engineer and air quartermaster. They train together and pass through a total of 90 flying hours on the Hercules before the 19-week course is over.

Five courses are run at a time at Thorney Island. For the first seven weeks the crew spend their time in Ground School getting to know the aircraft in detail from its systems, flying controls and engines, to the various ways in which cargo and troops can be carried. The captains are now generally experienced Hercules co-pilots selected for captaincy after about two years on operations. Hercules co-pilots have only recently begun to reach this level of experience and before this were drawn from the ranks of ex-Hastings and Beverley pilots.

During the initial stages of the course the crews get their first introduction to the magnificent new Hercules simulator which has been installed at Thorney Island and which provides a complete ground environment trainer for all navigation, handling, route flying and emergencies that could happen on the real thing. In fact, various combinations of the latter can be tried out on the simulator that for obvious reasons cannot be attempted in the air. Examples of this are such things as double engine failure, fire in the air and loss of pressurisation.

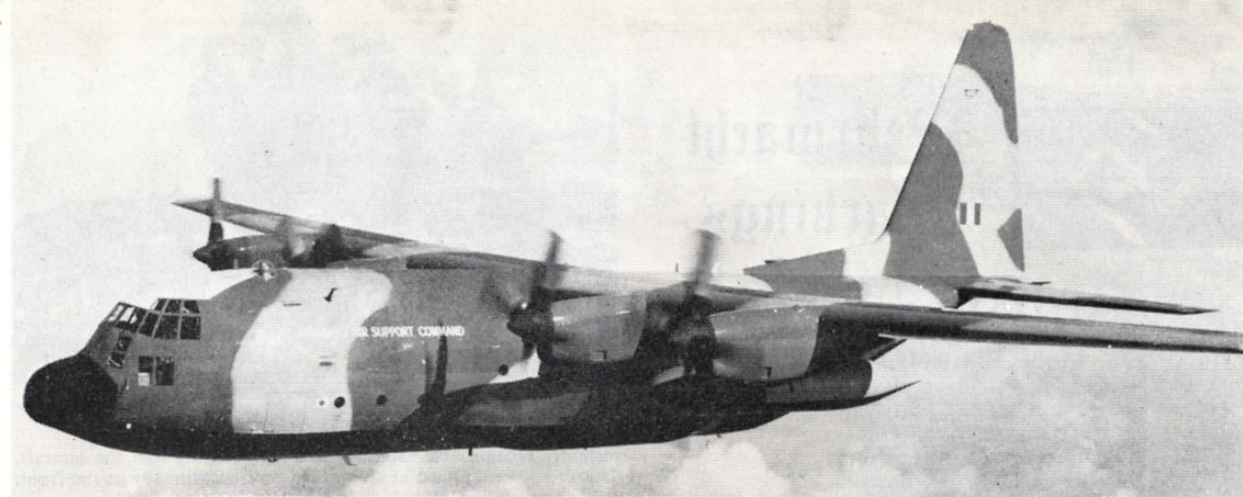
Five runs of four hours each are done in the simulator during the first seven weeks of the course. These generally follow UK navigational routes but also introduce systems failures and emergencies. Later more complicated navigation cross countries are carried out on



a route over the Mediterranean area with stops at places like Gibraltar, Malta or Cyprus. When I visited the simulator building I found it set out just like an aircrew briefing room with all the necessary maps, route diagrams and information on airfields that can be found in the normal briefing room on the flight line. The crews are also briefed on meteorological conditions, airways information, routes and the load to be carried before they go, and they also get a de-briefing after each flight lasting up to 10 hours. At the moment the simulated Hercules cockpit is 'blind'—that is, there is no visual presentation of a runway for the crew to watch but in February this will be modified to take a full colour system. Even so, realistic noises accompany all operations on the flight deck—built-in runway 'rolling' noises and even bumps on the concrete of a taxiway can be clearly heard and felt. The simulator which has cost several hundred thousands of pounds can be banked climbed and dived realistically as it is mounted on three-dimensional hydraulic jacks which can simulate every manoeuvre a Hercules is likely to make. Only the effects of 'g' cannot be built in. Similar installations are in use at Lyneham and eventually there will be four Hercules simulators, including the Thorney Island one, available for training RAF aircrew.

The final part of the flying course at Thorney Island lasts ten weeks. It includes route flying to the Mediterranean and back, supply dropping and night flying. The latter is carried out away from the UK because of the problems of weather and noise nuisance in the south of England.

There are eight aircraft at Thorney Island in use for the conversion courses. They are standard Hercules C Mk 1s and unlike many of the aircraft on the squadrons do not rotate with the maintenance base at Colerne near Bath. Apart from major servicing these eight aircraft remain at No 242 OCU and can be distinguished by having



side numbers approximately 2 ft 6 inches deep in white on the nose under the cockpit windows.

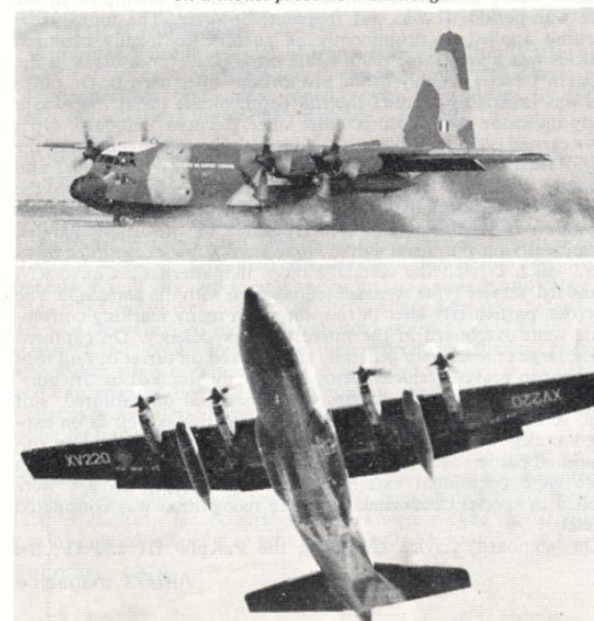
Main Hercules Base

Although RAF Fairford, Gloucestershire, has two Hercules squadrons (Nos 30 and 47) based there they will eventually be concentrated at the main Hercules base, RAF Lyneham, Wiltshire, by the end of 1971. Joining them will be No 48 Squadron at present stationed at Changi, Singapore, after the closure of the RAF's Far East commitment. At present only two Squadrons, Nos 24 and 36, are at Lyneham, but all except FFAF are administered by No 48 Group Air Support Command RAF Odiham.

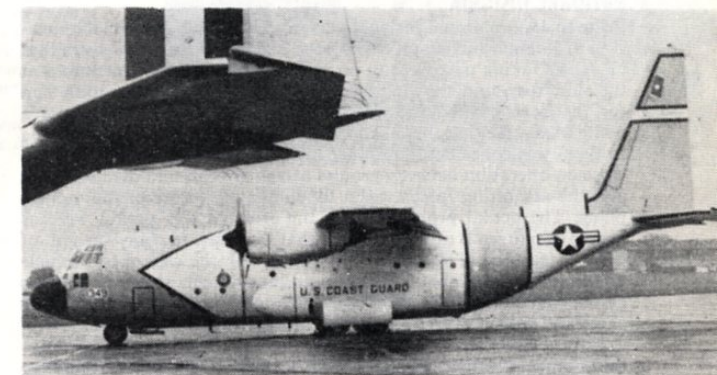
The role of the Hercules is varied. They have recently given up their five aircraft a week schedule to the Far East which reached Changi in under 24 hours' flying time with, if necessary, only one stop at Bahrain. Normally the route is flown with more stops particularly on the return to the UK flight. Now only one slow flight per week is made.

At home the aircraft are held in readiness for any tactical Army exercise in which the aircraft's ability as an aerial delivery system can be exploited. Frequent air transport support training is carried out with paratroops and supply drops are made whenever the Army needs this sort of exercise.

Below: Creating its own minor dust storm this RAF Hercules takes off from a desert airstrip on a mobility exercise. **Bottom:** Such activities lead to this. Hercules XV220 has its otherwise gloss black undersurfaces streaked with dirt and mud after operating from rough airstrips during tactical exercises with the Army. Getting this effect on a model presents a challenge.



Above: This excellent air-to-air photograph of the RAF Hercules was taken some time ago shortly after the aircraft had entered service. Note that the astro-dome still appears. Since then it has been removed from most of the aircraft. **Below:** Colourful US Coast Guard machine has yellow, grey, white finish.



When I visited Lyneham I saw men of No 16 Para Brigade loading two Land Rovers on to medium stressed platforms for air dropping over Salisbury Plain. Two of these MSPs can be carried by each Hercules, and the vehicles were lashed down on to the platforms which have inflatable air bags under them to soften the landing. Generally three large parachutes are attached to the platforms for air drops and the whole package slides easily into the capacious hold of the Hercules in a matter of seconds. The ease with which this can be done was explained by the use of the roller mat platforms inside the aircraft's cargo hold. These consist of a large number of small bearings set to rotate in a double strip along the floor rather like railway lines. Even the heaviest loads can be pushed backwards and forwards at will by only one man.

One of the Hercules' greatest virtues is its versatility of role and the speed and ease with which it can be converted from one role to another. The basic hold configuration simply has two rows of the distinctive, folding, red coloured, para seats lining the walls and it is in this configuration that Air Support Command's Hercules probably spend most of their time—carrying passengers in the admittedly not too comfortable and noisy cargo area. The passengers more often than not have to brace their feet against the sides of an Army three tonner or Land Rover lashed down only a few inches in front of them. Fitting the roller mat platforms within this basic configuration is literally a matter of minutes, turning the aircraft instantly into a heavy load air dropper. This is also the configuration used on the scheduled freight runs to Singapore. Previously-loaded cargo platforms are driven to the aircraft aboard a ubiquitous Condec variable height loader, slid straight into the belly of the machine, lashed down and slid out 24 hours later on the other side of the world. As a pure troop carrier the Hercules holds 92 fully equipped men using two extra rows of para seats mounted back to back down

Continued on page 268



Wehrmacht Markings

1939-45

GUIDE FOR MODELLERS

by W. J. K. Davies

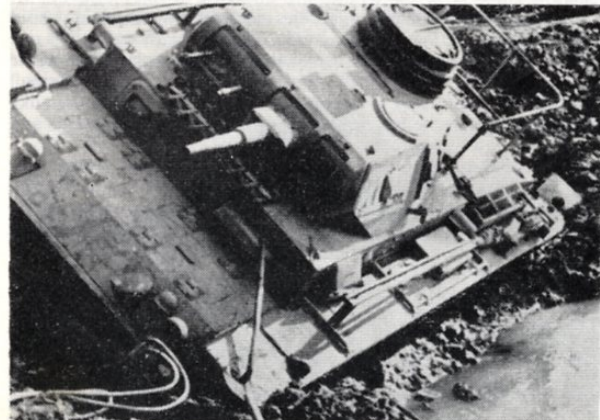
Part 2: Tank markings

BY OKW decree, all fighting vehicles—as distinct from transports—were supposed to carry symbols prominently displayed to allow easy tactical identification by friendly units. These symbols consisted of two distinct types—the national insignia, and tactical numbering.

NATIONAL INSIGNIA

Prior to 1939 national insignia was rarely applied, but for the invasion of Poland starting on September 1, 1939, orders were given that all AFVs taking part were to be marked with a plain white cross at the side, rear, and showing to the top. This was a recognition sign for the benefit of 'friendly' forces. The air recognition sign of a white cross on either turret, superstructure, or bonnet top (according to type) was considered particularly important in a campaign where close co-operation between ground attack aircraft and dive bombers and the assaulting forces was a fundamental feature of the tactical plans. The actual proportions of the cross at this period were as shown in pattern B of Fig 1, except that the black portion was not, of course, featured. The actual size varied with the size of the vehicle and the space available for display. In model form, this type of cross can be made very easily from two strips cut from plain white transfer sheet and placed across each other at right angles.

For the invasion of Norway, April 1940, and subsequently France and Flanders, which started on May 10, 1940, a change was made to the more familiar pattern of cross which matched that used as a national insignia on Luftwaffe aircraft. This is shown as pattern C in Fig 1. Reasons for the change remain conjectural but presumably it was due to the desire for a slightly less prominent recognition sign in the face of what was expected to be stronger opposition, combined with the desirability (for morale reasons) of having a more



Above: The plain white cross used in the Polish campaign of 1939, displayed here on the turret top of a PzKw III Befehlswagen. Note also the II indicating a battalion (abteilung) command vehicle on the turret side. Top of page: PzKw III Ausf D in the Norwegian campaign, April 1940, displaying the new standard cross and with white tactical number. Note old style rhomboid number plate adjacent to cross, but with number painted out. (Imperial War Museum photos).



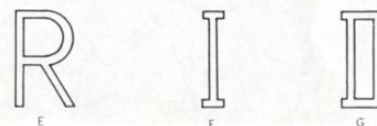
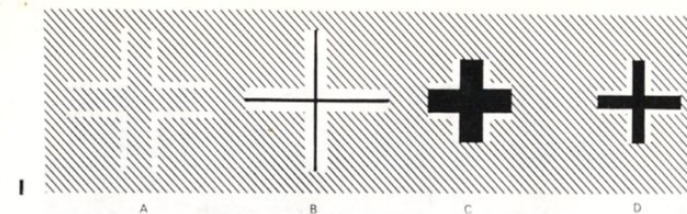
instantly recognisable German national marking like the aircraft. This cross was applied at sides, rear, and occasionally at the front. When not applied elsewhere it was usually painted at least on the back of vehicles for the benefit of following troops. The cross as an air recognition sign was discarded at this time in favour of the German national flag which could be displayed on turret or hull top at periods of 'friendly' air activity and quickly removed when enemy aircraft were in the vicinity. This style of cross, proportioned as pattern C, remained the most common style for the rest of the war, used in conjunction with the national flag for air recognition.

However, a further pattern much in evidence from May 1940 and well into 1941 was that shown in pattern B, Fig 1. This was carried on vehicles in units which had been used in the Polish campaign and were then subsequently withdrawn and sent to take part in the invasion of France. The old plain white cross was simply 'converted' to conform with the black/white cross orders by painting a black centre inside the original plain white cross. A perfect example of this is shown in the PzKpfw II which was illustrated in last month's installment. Note that the white cross which would have been displayed on the turret top in Poland has been painted out or otherwise scrubbed off. There were numerous variations on this pattern depending, more or less, on the whim of whoever painted the black inside the cross. Often the black section was much thicker. A pattern somewhat between B and C was also frequently seen, mainly on vehicles repainted in the field where a new cross was painted roughly by hand to match individual interpretations of the standard pattern. A good example is shown on the Afrika Korps PzKpfw IV illustrated last month which displays a very crudely hand-painted cross.

Two other patterns are shown which were also sometimes seen. Pattern A was sometimes hand-painted very prominently on locally captured vehicles and was frequently very crudely applied. This type of cross also seems to have been painted occasionally on 'standard' vehicles where maximum concealment was being attempted in the later war period. It was not frequent, however. The more usual marking applied as prominently as possible to locally captured vehicles was a very large plain white cross (sometimes black in the Western Desert) roughly in the proportions of pattern B. On tanks this was invariably painted the full depth of the turret and was a ready indicator of a captured tank since German 'standard' types never carried crosses on the turret sides with the sole exception of the Royal Tiger in 1944-45. Captured vehicles which were refitted and properly repainted before being put back into service with the German forces normally carried a properly painted cross as shown in pattern D. Again, on captured types this was invariably painted prominently on the turret sides. There were a few exceptions, however, which carried the standard cross in pattern C. Conversely, 'standard' service types were sometimes seen with the pattern D type of cross, particularly later in the war when many marking conventions went overboard in the interests of expediency. On captured types, large crosses were generally still marked on turret or hull tops this time to prevent vehicles being mistakenly attacked by 'friendly' forces. These prominent crosses were displayed on captured 'soft skin' vehicles (of which the Germans had many) as well as on captured tanks. German 'standard' soft skin vehicles (including unarmoured half-tracks) never carried crosses as a general rule, though there were occasional exceptions when temporary crosses were applied in special circumstances where recognition was considered crucial.

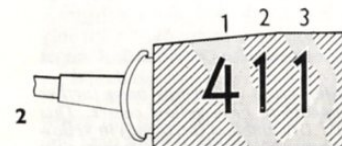
On 'standard' service tanks, eg, the PzKpfw III and IV, the

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Drawings by Gordon Riddle

crosses were generally applied very small on hull sides and rear and they were frequently obscured by equipment or skirt armour, etc. The same rule applied to 'standard' half-track armoured carriers, armoured cars, and SP guns. SP guns adapted on foreign or captured chassis generally displayed much larger crosses, however, again because their outlines were far less familiar to the troops than the 'standard' types which featured in recognition handbooks and were more commonly seen. With the application of Zimmerit and more elaborate camouflage patterns later in the war, cross patterns and positions began to fluctuate greatly as individual crews repainted crosses and other markings with a great deal of divergence from the standard pattern.

Plain white swastikas were sometimes used on captured vehicles painted in the style shown in the leading title. Occasionally the white swastika was also used as an air recognition sign on bonnet or turret tops, usually quite crudely painted.

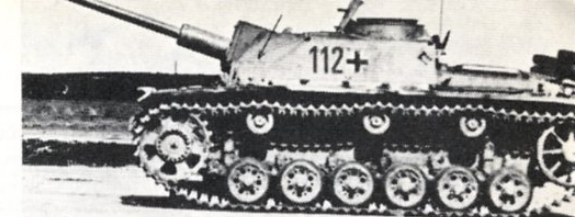
AFV TACTICAL NUMBERING

Armoured fighting vehicles of organic divisional units were supposed to carry easily visible identification numbers to enable unit commanders to communicate quickly with their forces. By OKW order the following units were involved:

- (1) All tank units
 - (2) SPW (armoured personnel carrier) battalions of panzer grenadier regiments and armoured engineer units.
 - (3) Unit Staff armoured vehicles up to Regiment level.
 - (4) Armoured infantry companies of the Recce battalions.
- Note that Divisional staff, armoured cars and self-propelled guns were not included. Armoured cars were presumably not intended to operate in unit strength at any one point; and assault and other SP guns were considered as part of the artillery arm (see below). In practice, however, all types of armoured vehicles could in the later stages of the war be found with these numbers. This was because heavy armoured cars sometimes equipped heavy recce companies and panzer grenadier anti-tank companies, while assault guns of all varieties were often allocated to divisional tank regiments in place of battle tanks from 1943 on.

The original system comprised a three-figure group based on the Regiment as a unit—or in appropriate cases, on the semi-autonomous *abteilungen* already listed (ie, the biggest unit likely to have tactical control). Headquarters vehicles were picked out from the rest by special letter/figure groups as detailed below.

February, 1970



Top: Typical assault gun markings on a late-model StuG III with standard cross and solid black numbers. Rectangle outline carrying weight marking is just visible at forward end of superstructure. (arrowed). Centre: The rarer four digit number indicating, in this case, a Puma armoured car of the 11th Company. Armoured cars had crosses on turret or hull according to type. Vehicle has black numbers with white outline but solid white number (partly obscured) repeated on hull rear. Above: Batterie letter on superstructure front of StuG III.

Regiment HQ: All vehicle numbers comprised a large R, followed by a two digit number as follows:

Cypher	Meaning
01	Regimental Commander
02	Adjutant
03	Either Ordnance or Signals Officer
04	(And upwards) Other RHQ Vehicles

Note that there were normally eight tanks in a tank regiment HQ, and in a battalion HQ.

Abteilung HQ: Used the same cypher arrangement but was prefixed by a large Roman I or II in place of the R, indicating first or second battalion (eg, II 01- commander of second battalion).

Within each battalion, a three-digit cypher was used, as shown in Fig 2. The first figure indicated the company within the regiment or highest administrative formation; the second figure indicated the *zug* or platoon within that company; and the third figure showed the individual vehicle within that *zug*. Special number groups were allocated within this system to the command vehicle of each company. 01 indicated the Company Commander and 02 the CSM, while platoon leaders took 11, 21 and so on. Thus, for example, the CSM of 1st Company of 2nd Battalion (5th company in the regiment) was 502, and the commander of 2nd *zug* in that company would be 521.

SPECIAL CASES

(1) Detached Tiger Companies when originally introduced used the 1XX series but when, as on the Russian front in 1943-4, they were allocated to divisions as the ninth company of a tank regiment (normally 2 battalions of 4 companies each by that time) they were allocated 9XX. The same presumably applied to cases where divisions had an assault gun company added as their 9th company, but no photographic evidence of this is available.

(2) If a unit, usually an SS or panzer grenadier division, had

Continued on next page

Wehrmacht Markings—continued

infantry regiments with three *abteilungen* heavy companies—sometimes equipped with Pumas or other armoured vehicles—could be the 10th or 11th company of a unit. The first cypher was then a double number (eg, 1011).

(3) SP Anti-tank guns. These were theoretically not included but some Elefants bore tactical numbers and in the later stages of the war the distinction between long-barrel assault guns and SP anti-tank vehicles was often non-existent. Such machines could then carry numbers when organised in the armoured regiments or in the armoured unit of a panzer grenadier division. This was officially a tank battalion but more often consisted of assault guns.

ARTILLERY BATTERIES

These originally included independent assault-gun brigades and armoured vehicles and bore the markings of their battery in the regiment or brigade. These were single letters running from A upward and were painted prominently in white, usually on the gun-shield and on the rear hull plates. There were constant squabbles among the High Command on whether armoured guns belonged to the artillery or the tank arm, and the struggle is reflected in the changes in markings which occurred!

COLOUR AND POSITION OF NUMBERS

In the 1939-40 campaigns, tactical numbers were carried on small rhomboidal plates (Fig 1, G) which were stuck or clipped on to the vehicle; the figures were in white on a black background. This was obviously so that they could be quickly changed from a disabled tank to a replacement one; in addition, both tanks and SPWs often had small individual single or double digit numbers painted on in black, presumably to identify a vehicle within the unit allocation for maintenance purposes.

These plaques proved not entirely satisfactory and official practice was changed from 1940 to allow the painting of tactical numbers directly on the armour plate. They were normally applied to turret sides and rear of tanks; and to the side and rear hull plating of other AFVs. All letters and numbers were intended to be the same size but in practice Regimental or battalion HQ vehicles often had the R or I painted bigger than the other two numbers; in some cases the latter were even omitted completely. Size in general varied widely, often depending on the skill and camouflage requirements of units in the field.

Originally the numbers were painted in white, which showed up well against the 'standard' panzer grey colouring but with the progressive adoption of—largely sand-based—mottle camouflages, this was changed to red numbers outlined in white for better visibility. Black infilling latterly replaced the red and on occasion, infilling was omitted altogether just leaving the white outline. Plain white numbers were still to be seen on some vehicles right up to 1945, however.

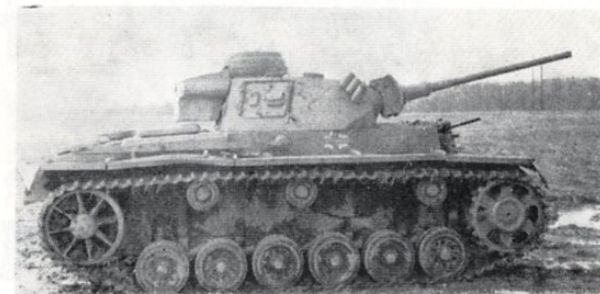
In the Air — from page 265

the centre line of the hold. Its final role is casualty evacuation—a role in which the Australians have used it for some long time for flying home wounded men from Vietnam. Each aircraft can carry up to 74 stretchers mounted in tiers.

Support for Anguilla

The Hercules is such a versatile aircraft that the recent operations in the Caribbean in support of the ground forces in Anguilla could not have been done so adequately and efficiently without its help.

Apart from the recent rush to get troops to Northern Ireland this has been the only full scale operation that the Hercules has been concerned with where actual rather than simulated operational conditions have been met. With a full load of supplies only one stop is made on the outward journey to Bermuda. On some of the return flights the aircraft come back direct to the UK showing how important the tremendous range of the aircraft can be. Add to this the



Top: An example of the white outline cross which has been further decorated by the crew with what appears to be a yellow centre. This PzKw III Ausf L also has the 10th Pz Div emblem (arrowed) in yellow and a partly obscured tactical number 322 in black on turret side. **Above:** The German national flag in use as an air recognition sign on the back of PzKw IIIs crossing the Don during the invasion of Russia in 1941.

OTHER MARKINGS

Less frequently seen was the chassis number, the position of which depended on the type of vehicle. It was only really prominent on the PzKpfw III and IV where it was painted in small black stencil figures over the front machine gun position on new vehicles, frequently being overpainted when the vehicle was in service. Also painted on most vehicles was a small black outline panel carrying the legend 'GefGew (number)' and 'Ve.Kl. (number)' in small stencilled letters, indicating combat weight and shipping weight respectively (in tons). This again was frequently obscured but when visible was usually on the forward hull side. In 1:76 scale, however, it was so tiny that it can be ignored as far as the modeller is concerned. On the Panther and Tiger only the shipping weight was painted and the Panther chassis number (when new) was stencilled on the glacis plate just above the mudguard, in characters about 3 inches high.

problem of the unprepared surface of the Anguilla airfield with its extremely short length and lack of normal landing aids and the Hercules is in its element.

GLADIATOR HUNT

THE RAF Wyton Sub-Aqua Club are planning an expedition to Lake Lesvasjog in Norway later this year to continue the recovery of the remains of the Gladiators of No 263 Sqn, lost during the ill-fated campaign of 1940. The expedition will consist of ten members, eight divers and two technical assistants, and will be under the command of C/T. M. B. Glover. Five members of the expedition visited the RAF Museum on December 12 last and were allowed to examine the remains recovered by the 1968 Cranwell team as well as the Museum's own Gladiator. A list of parts required by the museum was obtained and these will take priority when diving at the sites. It is hoped that four airframes will be raised and these, with the bits and pieces recovered, will be handed over to the museum for possible restoration.

M4A3 HVSS

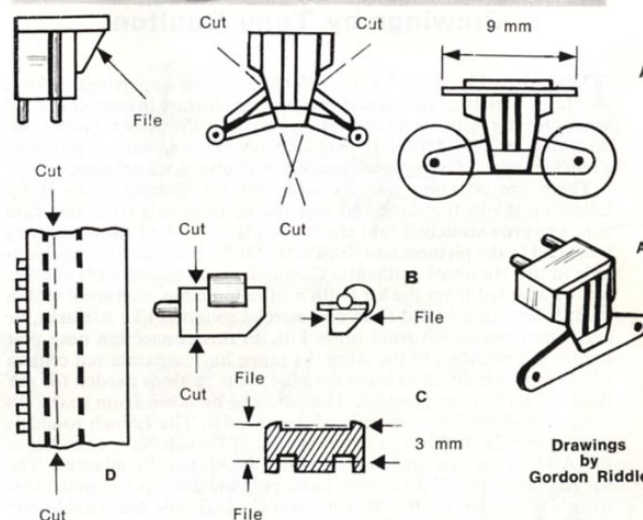
Late production Sherman conversion

By Charles Kliment

THOUGH one way of producing late-model Shermans (HVSS) in 1:76 scale is to use the Airfix Sherman hull mounted on the chassis of the Minitanks M40 SP gun, this is not always economical, particularly if you want to produce HVSS Sherman models 'en masse'. In some countries, including my native Czechoslovakia, Minitanks models are so hard to get that you would never think of cannibalising them anyway. Hence I evolved a way of producing HVSS (horizontal volute spring suspension) utilising the existing components in the Airfix kit. This is quite easy, as shown in the drawings accompanying this article. Here is how it's done:

From the main bogie brackets cut the extensions with the axles and file the front part flat. Then file the edges of the rear and front bracket parts and cement together. Now file the Sherman wheels to 3 mm thickness, both front face and rear, with bevelled edges and glue them to the arms from both sides. Then cement these assemblies to the hull sides. The front sprocket can be used as it is, only do not push it all the way down into the hole in the hull, but align it with the road-wheels. It is necessary to file down the teeth of the sprocket where the track will touch it. The rear idler wheels must be made, and I cut them from plastic rod (I suggest a large size plastic knitting needle) whose diameter matched that of the original idlers. Strictly speaking the new idler needs a rim, which I made by lathe-cutting using a hand-lathe improvised from a drill as in previous AIRFIX magazine articles. You could leave the wheels plain, however. Scrap plastic rod is also used for the return rollers which are made from scratch. Now on the brackets between the wheels the horizontal springs, made from stretched sprue, are glued, and the small cylinders under them I made from the original return-rollers. For track I used Tiger track, cut inside the second row of teeth. All the details are, again, seen on the drawings. You will agree that while this suspension is not entirely correct, it looks very realistic. The Tiger tracks must be shortened to Sherman length, naturally.

This completes the work, which is not very difficult. The process can be applied to any version of the Sherman fitted with HVSS. Chris Ellis described the additional modifications needed to make a M4 (105 mm Howitzer) in the May 1967 issue, so for variety I made my model up into a M4A3 (76 mm) HVSS, which has not been featured before in AIRFIX magazine. My main source of reference was the Profile on the M4A3 which will be familiar to most modellers and can still be obtained from the larger model shops like BMW Models. Apart from the suspension which is modified as already described, the major change for the hull concerns the fitting of a new 47° hull front. This is simply a flat plate of card or plastic card cut to match the width of the original glacis plate, with cut-outs to clear the tracks at the lower corners. The hull machine gun is omitted from its original location and filed down and cemented in the equivalent position on the new glacis plate. The new hull front is cemented in place with its top resting against the original raised hatchways. Then the gaps in the sides of the hull front are filled with triangular slivers of card or plastic card. After this fill all gaps with body putty



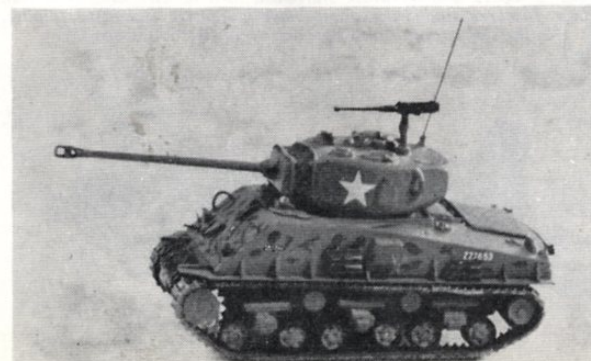
Above: Working drawings for converting the existing vertical volute suspension of the Airfix Sherman to HVSS type for the M4A3. A: bogie alterations, B: return roller alterations, C: amended wheel profile, D: cutting Tiger tracks. For a more 'instant' conversion use the complete Minitanks M40 chassis to get same effect. Pictures show completed M4A3 HVSS conversion.

or cement and sand smooth to eliminate the join lines. The bolt ridges moulded on the lower nose must at this stage be filed off to give a smooth nose.

Use plastic putty or Plastic Padding to fill in the front top of the hull, round the existing drivers' hatches, and sand smooth. You can either etch in new drivers' hatches or cut them from thin paper and cement in place. Small track covers which project over the wider track edges are needed along each hull side. I cut these from thin plastic card and cemented them under the hull overhang. Spare track shoes were usually carried on the ledge so formed. Finally, amend the hull rear and engine decking to conform to M4A3 layout. A new hull rear plate can be cemented over the existing one, and a radiator is made from plastic card and cemented below this. File off the existing engine cover detail and etch new panels. Alternatively you can cement on new panels, and cooling grilles, from thin paper, scoring all the detail before cutting out. After painting, this method is most effective.

All that remains is the turret which is completely different. You could carve a new one from balsa or other wood, but I built up the new shape by applying layers of Plastic Padding to the existing turret and filing to shape. The 76 mm gun comes from a Panther previously converted to a Panther OP and the cupola also came from a Panther which had been converted to the earlier Panther D with the older type of 'dustbin' cupola. The Panther cupola needs extensive filing, of course, to match the correct pattern of the M4A3 type. The loader's hatch was a driver's hatch with all its detail filed off and the complete assembly cemented on the opposite side of the turret top. The original mantlet is used with a paper cover and edges to give it the appearance of the bigger mantlet used in the M4A3.

Continued on page 299



F6F Hellcat

FINISHES FOR THE AIRFIX MODEL

Presented by Robert C. Jones

Drawings by Tony Boulton

THE Airfix kit of the Hellcat offers numerous opportunities for a large variety of colour schemes and this feature in our occasional series dealing with naval aircraft types from the Airfix range concentrates on the Hellcat in Royal Navy service, with a post-war French example for those who seek something more off-beat.

There are no complications with this kit. Simply make it up following the instructions and add the small airdials from fine fuse wire or sprue stretched into the finest filament. Add drop tanks as indicated in the pictures and drawings. All the paint shades are available in the Humbrol Authentic Camouflage range and the roundels can be adapted from the kit (with a little judicious alteration with a paint brush) or adapted from commercial roundels like Almarks, or even from spares left from other kits. In this connection note that the British roundels in the Almarks range have separate red centres which can be omitted to leave the blue white sections needed for the British Pacific Fleet roundel. The bars can be taken from spare US insignia and applied each side of the roundel. The French roundels offer more of a problem but there is a set of French Navy roundels in the ABT range intended for a Corsair which can be adapted. The squadron badge will need to be hand-painted and it is suggested that the red centre cut from a British roundel of suitable size would form the ideal basis. Codes and serial digits offer no problem if you have a stock of spare transfers. 'Royal Navy' and serials of suitable size are available in both the De Frey and Almarks ranges also.

Full interior painting details and colours were given with the Avenger article which appeared in the November 1969 issue and the same notes are applicable to the Hellcat, as are the remarks given then for paint finishes. The only other point is to make sure you use the correct optional parts from the kit (ie, canopy and cowl) for the version you choose to make.

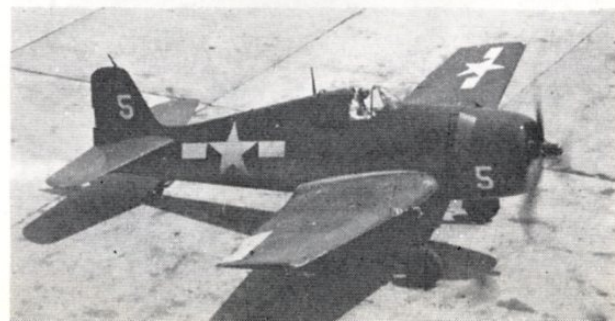
Below: Spectacular pile up aboard HMS Ameer in 1945. Hellcat II JW723:6G is in temperate finish as drawn opposite and has its C type roundels converted by painting to British Pacific Fleet type. Fin flash remains in original style. The Sea Blue Gloss (wrecked) machine has the more usual blue/white roundels with the white i/d strips overlapping (Frank Perry).



Above: Hellcat FIIs of 800 Sqn, FAA, ranged aboard HMS Emperor entering Singapore Harbour, September 1945. Sea Blue Gloss finish with white i/d bands. Nearest aircraft is coded C3-H, serial JZ999, in white (N. J. Watson). Below: Hellcat F1 JV102 takes off in the Aegean Sea area; 800 Sqn, FAA, aboard HMS Emperor, September 1944. (D. Neville via R. C. Jones).



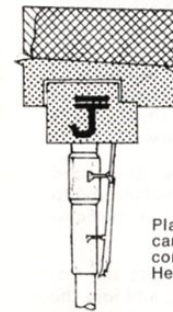
Above: Hellcat F1, JV141: 116 of 1839 Sqn, flown by Lt Cdr D. Jenkins 'in the wire' after strikes on Sakishima Gunto with British Pacific Fleet Task Force 57.2. Note the aircraft identification numerals '116' painted on front of undercarriage door covers as drawn opposite. (D. Jenkins via R. C. Jones). Right: Hellcat F1I, C3-M: JZ931, 800 Sqn, finished in Sea Blue Gloss with white i/d bands, codes and serials. Note white/blue fin flash but as yet unmodified fuselage roundels still in red/white/blue/yellow. The 'M' overlaps the roundel (N. S. Painter via M. Garbett). Below: A simple finish for a F6F-5 model would be the overall Sea Blue Gloss of this machine from the US Navy Fighter School, Pensacola, in 1952. It has white '5' codes and off-white starboard aileron with blue trim tab. Lower fuselage and wing roots have extensive exhaust staining. Rudder trim tab also appears white (R. C. Gibson).



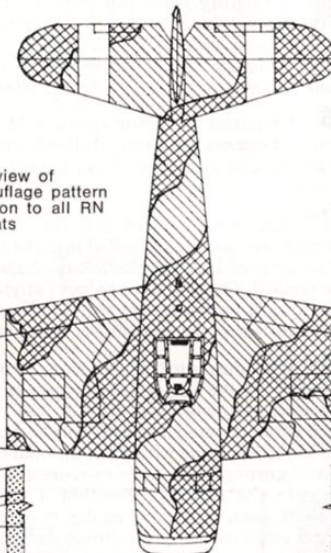
Hellcat FI, JV108 : E-B, of No 800 Sqn, FAA HMS 'Emperor', Tirpitz operations, 1944

All details below relate to Hellcat FI, JV321

Code on wheel doors of JV321

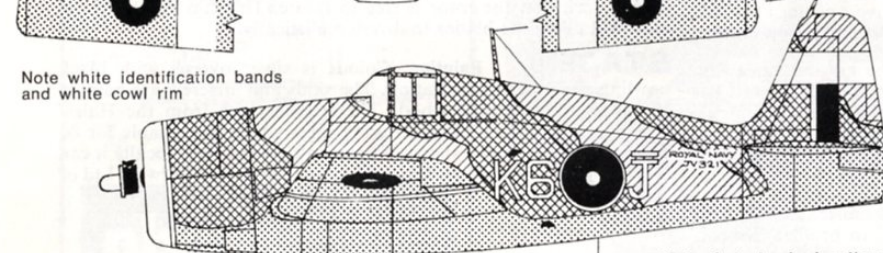


White wing and tail bands apply to JV321 only



Plan view of camouflage pattern common to all RN Hellcats

Note white identification bands and white cowl rim

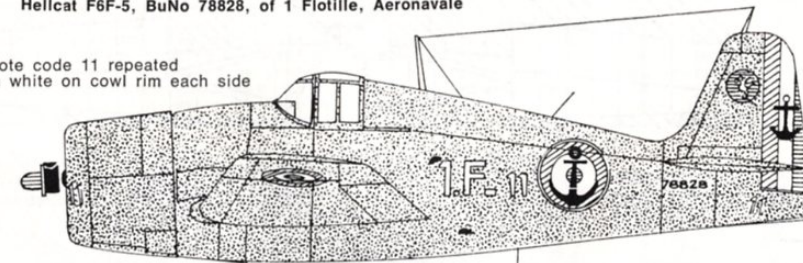


White/black spinner

Hellcat FI, JV321 : K6-J, of No 808 Sqn, FAA HMS 'Khedive', 1945

Hellcat F6F-5, BuNo 78828, of 1 Flotille, Aeronavale

Note code 11 repeated in white on cowl rim each side

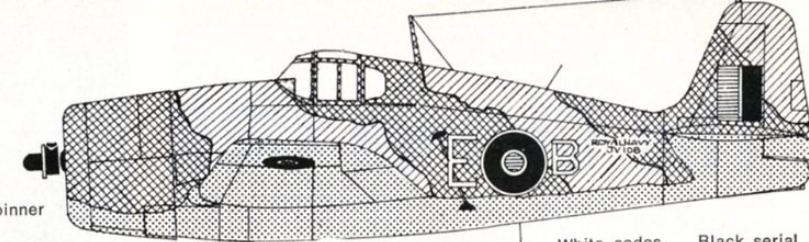


Red spinner

White codes



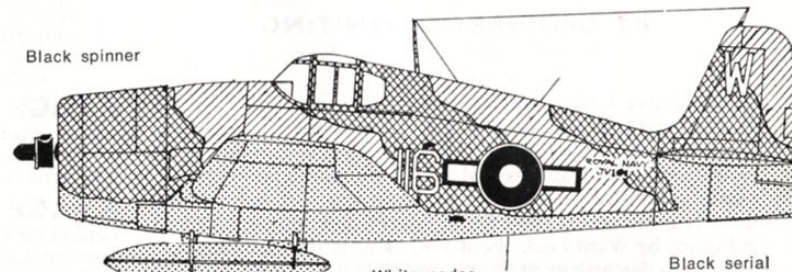
Extra Dark Sea Grey Dark Sea Grey Sky Sea Blue Gloss French Roundel Blue Red Roundel Blue



White codes Black serial

Hellcat FI, JV141 : 116 of No 1832 Sqn, FAA HMS 'Indomitable', British Pacific Fleet, Task Force 57.2, 1945

White tail code

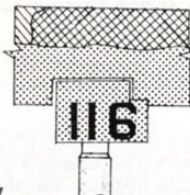


Black spinner

White codes

Black serial

Code number on wheel doors of JV141



Wing marking position for JV141; note that roundel was carried on port upper and starboard lower wings only conforming to US practice



Full-size (1:72 scale) pattern for wing roundel

Scales

Side elevations: 1 : 96 (1 inch to 1 foot)
Plan views: 1 : 144

Enlargement of 1 Flotille unit marking; brown and yellow seahorse on red disc background



The Cierva C8R

A SIMPLE CONVERSION
FROM THE AVRO 504K

BY GEOFFREY G. WHITING

THE Cierva C8R makes an interesting conversion from the Airfix 504 kit. The original machine was built in 1927 from surplus Avro components and was, in fact, a rebuild of the earlier C6D. Photographs and details of this series of experimental aircraft appear in Putnam's *British Civil Aircraft* and there is a picture of the C8L in *My Picture Book of Aircraft* published by Ward Lock about 1931. This latter illustrates very well the undercarriage and rotor assembly which were common to both machines.

STAGE 1 Begin by painting the engine and airscrew, then assemble the seats, fuselage halves, engine, airscrew, cowling and fin as in the kit instructions.

STAGE 2 Cut the tailplane sections to the new outline shape, sand the edges and the horns to an aerofoil shape. Fill the line of the elevator hinge across the horn with body putty and when dry sand smooth. Scribe the new line to indicate the horn.

STAGE 3 When the cement has set, enlarge the recess in the underside of the fuselage towards the front and cut the sides of the cockpits down to the edge of the decking to give openings curved front and rear but straight sided. Fill all strut holes and sand smooth.

STAGE 4 Take the lower wing from the kit and cut away all the unwanted portions. The leading and trailing edges must be sanded to an aerofoil shape and at the same time the ribbing extended to the edges by filing. Leave the tips square. Scribe the new aileron lines, fill holes and bore new ones for undercarriage and bracing.

STAGE 5 Cement wing into new recess under fuselage and when dry make up with putty and finally sand to profile. Cement tailplane halves into place and as the struts in the kit are too thick, make new ones from stretched sprue and cement into holes provided. Cement kit tailskid into position together with additional struts. Cut wing bracing struts from 15 thou plastic card, sand the edges, taper the ends to almost a point, and cement in place.



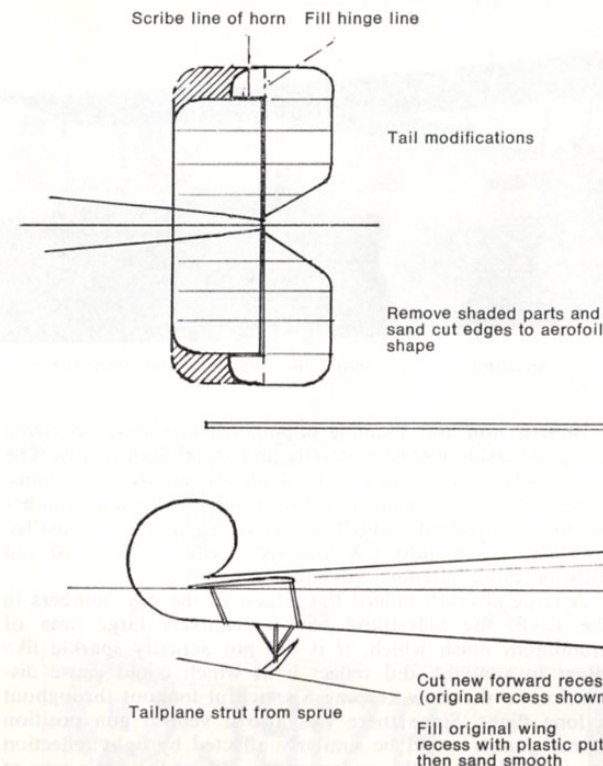
The Cierva C8R is a most attractive model for civil and vintage aircraft modelling fans, not least of its virtues being its relative simplicity which makes it ideal for beginners to kit converting, though care is needed with the plastic card struts and rotor blades. The two pictures on these pages show all salient features of the finished model.

STAGE 6 Construct the pylon struts of 15 thou plastic card treated as before and cement into holes drilled in the fuselage and to a 1/10 inch length of tube at the top. Take care the pylon is true to the aircraft's axis.

STAGE 7 Assemble the skid and vee struts from the kit. Cement the kit oleo legs into holes drilled into the wing and join the lower ends with a strip of 15 thou plastic card 2 mm wide, arranged so that they are vertical. Cement short axes of stretched sprue to the ends of the plastic card and assemble the kit wheels. Note that the card spreader passes below the skid and is cemented to it.

STAGE 8 Cut four rotor blades from 20 thou plastic card and sand the edges on the upper side to give an aerofoil shape. Assemble at the centre to two 3 mm discs of 20 thou card. Pass the shaft of stretched sprue through a central hole and cement. Assemble the braces from stretched sprue with an additional layer cemented to the upper half and grooved with a file to represent the springs. This is shown clearly in the drawing. Position a small card bearing washer on the shaft, cement, and when dry pass through the pylon tube and cement a small washer on the lower end to retain it in position. Check that the rotor is free to rotate. The thin nature of the card will allow the blades to droop realistically.

STAGE 9 **Painting.** Colour is silver overall with black cowling panels and registration. The skids and airscrew are painted to represent varnished wood. The transfers are from the Hales/Yeoman 1/4 inch deep black lettering sheet which is available for 8d from most large model shops. If you can't get the sheet locally it can be had by post from Jones Bros of Chiswick or Ernest Berwick Ltd of Kettering.



Military

photoPAGE

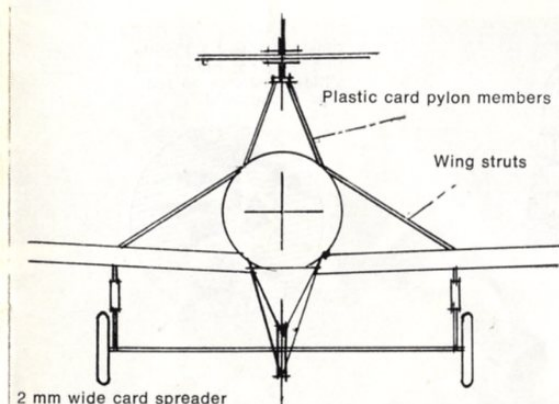
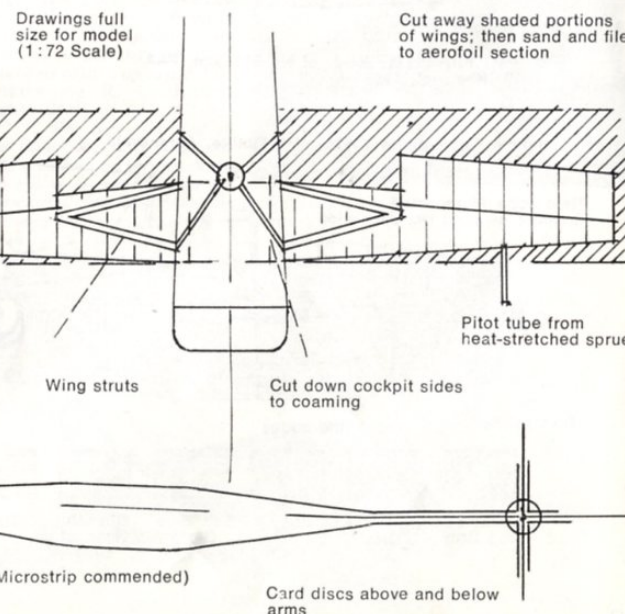
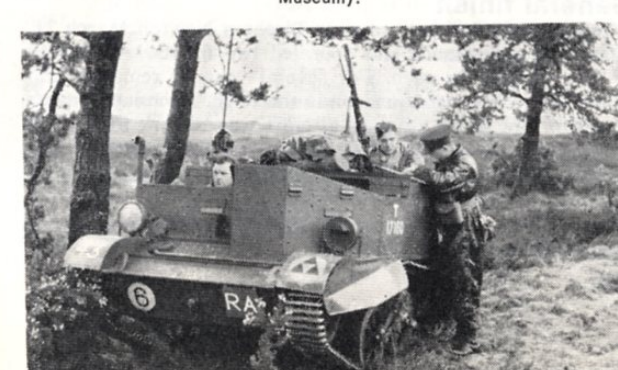
A new occasional feature with pictures of interest to armour and military enthusiasts.



Above: First official picture released of the new Fox armoured car which will be in British Army service in the early 1970s. It has a 30 mm Rarden automatic cannon and a built-in flotation screen round the top fender line. It is powered by a militarised version of the famous Jaguar XK 4.2 litre engine. The Fox has sophisticated vision and navigating devices and is manned by a crew of three. Its ancestry in the Ferret is clear from this view (Daimler photo).

Below: From reader David F. Leslie comes this splendid view of a knocked out German A7V tank in mid-1918. It appears to be in three-colour camouflage of ochre (or light grey), green, and dark earth (or possibly mauve) all divided by black lining. The crosses are black and white and the skull device is on a black background. Small number 5 in white is just visible halfway along side. Note the 57 mm shells on the ground to the right.

Below: A Carrier Armoured OP No 1 Mk II of a field regiment of 3rd Infantry Division in March 1941. Finished in green and dark earth it has the red/black 3rd Division formation sign (three black triangles on a red background), unit serial 43 on red/blue artillery flash, RA in white on blue square, and bridge class 6 on a yellow disc. Number T17160 is white. Mudguard markings, and possibly the 'RA' sign, were repeated in same relative positions at rear (Imperial War Museum).



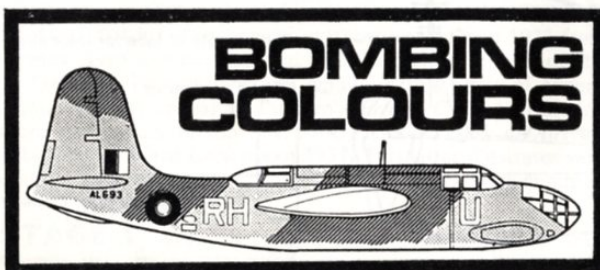
Use oleo legs and wheels from kit

All struts from plastic card (Microstrip commended)

Card discs above and below arms



Above: The prototype Sidestrand, J7938, before the dark green shading was extended to the fuselage undersurface (MoD photos).



Part II: The Boulton & Paul Day Bombers

THE Boulton & Paul day bombers had a lineage that spanned the two world wars, but missed operational service in both; and the two types that reached squadron service, the Sidestrand and Overstrand, formed the complete equipment of only one RAF Squadron, No 101.

The experimentals

Early in 1918 the design staff of Boulton & Paul, under J. D. North, put forward a high performance bomber project which was considered for three of the newly drafted RAF specifications, as a long or short range bomber and as a fighter reconnaissance. Production of three prototypes was recommended on April 15, 1918. Unfortunately the planned power plants, twin Dragonflies, were having protracted teething troubles and not until late October or early November did the first fly. It was finished in the usual PC10 which in 1919 was changed to AMA.

The three prototype Bourges F2903-2905 were produced in various forms and were followed by a developed all-steel version, the Bolton J6584, and then a new twin-engined medium bomber, the Bugle, of which seven (J6984, J6985, J7235, J7259, J7260, J7266, J7267) were built and finished in the standard aluminium finish of the mid-twenties. Not until Boulton & Paul's fourth bomber type, the Sidestrand ordered in 1927, did a production order result and this firm have an aircraft for squadron service.

General finish

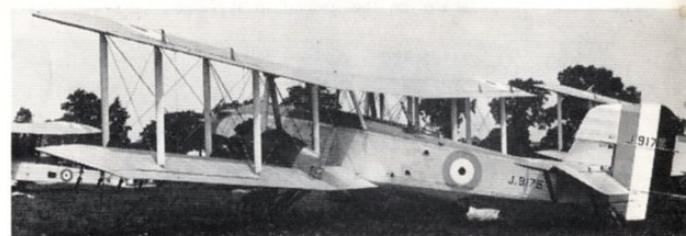
No 101 Squadron reformed at Bircham Newton March 21, 1928, with Sidestrands and operated two flights, 'A' and 'B' of four aircraft in each. For several years it remained the sole medium bomber squadron in the RAF. As a day bomber squadron, the finish of their aircraft was 'silver', to use the colloquial term for the finish. In fact the metal parts of the structure were sprayed with Air Ministry grey cellulose paint, and the fabric coverings were initially doped red (red oxide was a fabric protective) and given a final coating of aluminium pigmented dope.

Both Cellon and Titanine doping schemes were approved using red oxide pigment initially and aluminium finally. The actual scheme used was marked on all major components, wings, ailerons, fin, rudder, etc., as a suffix to the part number of the component, which appeared in 1 inch stencilled characters. The suffix CX indicated Cellon Scheme 10 and T2S indicated Titanine Scheme 2 sprayed.

A large aircraft, indeed the largest of the day bombers in the RAF, the Sidestrand had a relatively large area of aluminium finish which, if it did not actually sparkle like silver in sunlight, did reflect light which could cause discomfort to the crew keeping a watchful lookout throughout a long flight. Since there was also a ventral gun position whose gunner could be similarly affected by light reflection from clouds on to the undersurface and by the sun's rays at dawn or nightfall, a dark matt green shaded area was made to extend along the top decking, over the nose and on the undersurface of the fuselage back to the tail. Engine nacelles were also painted matt dark green, not so much because they were otherwise a reflecting surface but because oil blown back from the engine did not show up as much on the darker surfaces.

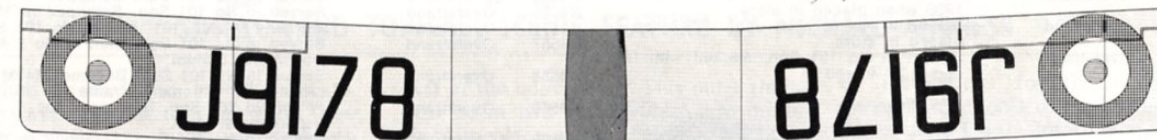
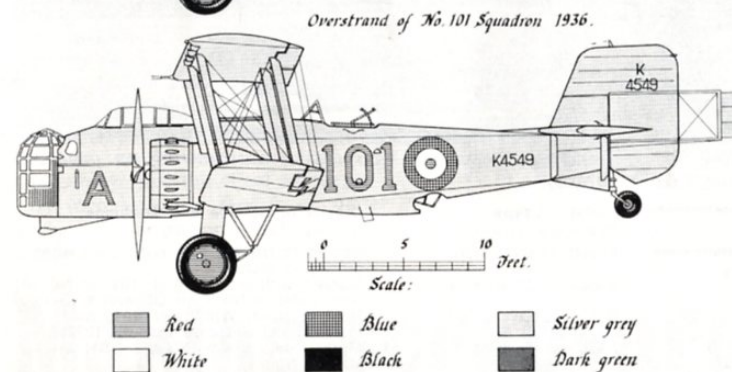
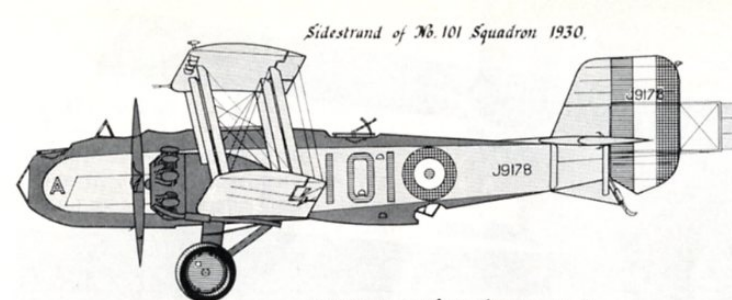
With the Overstrand, the restful green was discarded in service versions as the pilot then had an enclosed cockpit of very slightly tinted anti-glare perspex and the turret gunner on the nose was completely free from reflecting surfaces.

Bearing day markings, these aircraft were subject to the important changes that occurred to the national markings of all RAF aircraft. It was notified on August 15, 1930, that the order of colours on the rudder would be reversed. Since rudder striping had first been introduced in May 1915, it had always been blue from the rudder post, then white and red trailing. Now it was red from the rudder post, and this continues today with red leading on all fin flashes. The new instruction, issued to contractors, specified that the change would be effected on all aircraft delivered after Sept 29, 1930. In service the red portion was to be overpainted blue and the blue overpainted red with a final coat of clear dope or varnish to fix and protect the paint. On all service aircraft,



The first production Sidestrand J9176 with the dark green shading extended to the fuselage undersurface.

AIRFIX magazine



this had to be effected by the last day of October 1930.

Then change again. As the speed of aircraft increased, so the aerodynamic effects of the thickness of paint became more apparent and it was decided that control services should not be overpainted. This meant that roundel sizes were reduced so that they did not overlap on to ailerons, and rudder striping was discontinued altogether. This change was decreed from August 1, 1934, and it became effective during the remaining months of the year.

Squadron markings

Sidestrands were ordered to equip one squadron, with the Overstrand later replacing them in that squadron. Consequently Sidestrand and Overstrand unit markings are mainly those of the squadron concerned, No 101. This unit was based at Bircham Newton, Norfolk, from March 1928 to October 1929, then at Andover, Hants, until November 1934, and then at Bicester, Oxfordshire, where it was re-equipped with Blenheims in the summer of 1938.

As a day bomber squadron, it marked its squadron number 101 on the fuselage side, and as the largest day bomber operator, the squadron appropriately marked its number correspondingly large. To give the aircraft some colour within the rigid regulations, the '101' was painted in the officially approved flight colours, red for 'A' Flight, yellow for 'B' Flight and green for 'C' Flight. However, for the most part the squadron operated on a two-flight basis of four aircraft in each flight. A 'C' Flight was only formed for a short period in 1935 when the first Overstrands were on service trials alongside 'A' and 'B' Flights of Sidestrands, and for a short period later under the 1935 Expansion Scheme. Thus the '101' marking was, in the main, either in red or yellow.

Aircraft in the squadron were marked with an individual letter on each side of the nose, also in the flight colour. On

February, 1970



Above: Overstrand J9770 shows the standard finish. This particular machine was used for test work only and never carried any unit markings or, indeed, any sort of embellishment other than RAF roundels and serial (M. J. F. Bowyer photo). Left and below: Scale drawings show typical markings for a Sidestrand and Overstrand respectively in squadron service.

Drawings by A. M. Alderson
1:144 scale

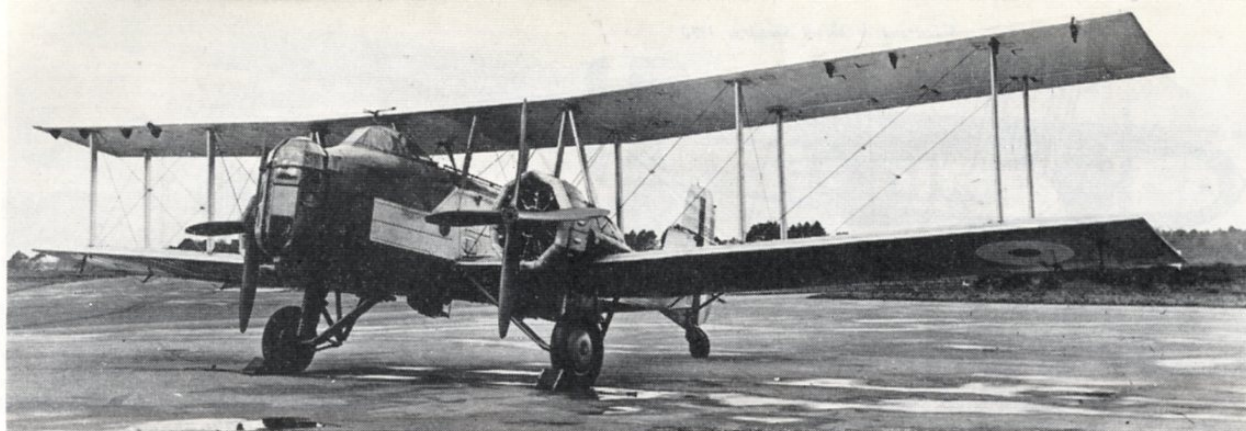
Sidestrands the letter was small and on Overstrands large.

Serial numbers

Marked in the conventional position of the period, on the rear of the fuselage, on the rudder and under the wings as illustrated, the serial numbers appeared in black. The range of numbers used and the individual markings and history of the individual aircraft were as follows:

Serial	Type	Details of Service and Markings
J7938	Sidestrand I	Served at Martlesham Heath and to No 101 Sqn, Apr 20, 1928
J7939	Sidestrand I	Used by No 15 Sqn at Martlesham Heath. To No 101 Sqn, Apr 18, 1928
J9176	Sidestrand II	Marked 'F' of No 101 Sqn from Mar 15, 1929 until crashed at Gosport Nov 22, 1929
J9177	Sidestrand III	Served in No 101 Sqn from delivery on Mar 7, 1929
J9178	Sidestrand III	'A' of 101 Sqn crashed on take-off Apr 25, 1929 and was rebuilt
J9179	Sidestrand II	2nd of type in No 101 Sqn as aircraft conv. to Overstrand
J9180	Sidestrand III	Crashed at Bicester Mar 30, 1936
J9181	Sidestrand II	Collected May 29, 1929. Crashed into tree at Catfoss May 5, 1930
J9185	Overstrand prototype	Collected July 13, 1929. Crashed on landing Aug 20, 1929
J9186	Overstrand prototype	'P' of No 101 Sqn. Crashed at North Coates Fitties Sept 9, 1935
J9187	Sidestrand III	Development aircraft. Bore black Park No 13 at Hendon
J9188	Sidestrand III	Served in No 101 Sqn, marked with red 'E'
J9189	Sidestrand III	Delivered Sept 19, 1929. Served as 'C' of No 101 Sqn
J9767	Sidestrand III	Presumed delivered to store
J9768	Sidestrand III	Presumed delivered to store
J9769	Sidestrand III	Served in No 101 Sqn. Crashed on endurance test Mar 5, 1933
J9770	Sidestrand III	Served in No 101 Sqn marked with yellow 'G' and '101'
K1992	Sidestrand II/III	Converted to Overstrand and used for development work. No known unit markings
K1993	Sidestrand II/III	Delivered to store

Continued on next page



Prototype Overstrand J9186, showing proposed shading for the type which was not adopted as the drawing on page 275 shows (MoD photos).

Bombing Colours — continued

Serial Nos.	Type	Details of Service and Markings	Serial Nos.	Type	Details of Service and Markings
K1994	Sidestrand II/III	First with auto pilot. Replaced J7939 with No 15 Sqn	K4550	Overstrand	Served in No 101 Sqn until 1938 when placed in store
K4546	Overstrand	Marked 'W' in No 101 Sqn. Crash landed at Bicester, June 11, 1937	K4551	Overstrand	Marked with red 'C' and '101' in No 101 Sqn. Later in No 2 Air Observers' School
K4547	Overstrand	No 101 Sqn service Oct 1935 to Sept 1936 when placed in store	K4552	Overstrand	Held in store. Withdrawn 1940 as instructional airframe marked 1822M
K4348	Overstrand	Served in No 101 Sqn until 1938 when placed in store	K4553	Overstrand	Marked with green 'Y' and '101' in No 101 Sqn
K4549	Overstrand	Served in No 101 Sqn, marked with 'A' and '101' in red	K4554	Overstrand	Served in No 101 Sqn. Scrapped in 1939
			K4555	Overstrand	Served in No 101 Sqn. Scrapped in 1939
			K4556	Overstrand	Marked 'F' and '101' and in No 101 Sqn
			K4557	Overstrand	Served in No 101 Sqn, then in No 2 Air Observers' School
			K4558	Overstrand	Served in No 101 Sqn. Became 2146M as ground instructional airframe
			K4559	Overstrand	'Y' of No 101 Sqn, later used for experimental work
			K4560	Overstrand	Served in No 101 Sqn. Scrapped in 1939
			K4561	Overstrand	Marked with green 'U' and '101' in No 101 Sqn
			K4562	Overstrand	In No 101 Sqn until Nov 2, 1936 when wrecked landing at Bicester
			K4563	Overstrand	'I' of No 101 Sqn, ending up as Instructional Airframe No 2174M
			K4564	Overstrand	No 101 Sqn until Jan 11, 1937 when crashed in fog at Swanbourne, Bucks
			K8173	Overstrand	No 101 Sqn then No 2 Air Observers' School. Crashed July 1940
			K8174	Overstrand	No 101 Sqn then No 2 Air Observers' School. Scrapped 1940
			K8175	Overstrand	Used by Aeroplane & Armament Experimental Establishment
			K8176	Overstrand	Taken from store for No 104 Sqn. Used by various units
			K8177	Overstrand	Last built, delivered to store, withdrawn 1940 as Instructional Airframe 2147M

Squadron service Sidestrand J9187. Compared with the photo of J9176 on page 274, it will be seen that this Sidestrand photograph was taken after the rudder striping reversal change.

(Sidestrand Mk Is were prototypes; Mk II and III differed by Jupiter VI and VIII engines respectively.)
NB The form Boulton & Paul has been used in this article since not until 1934 did the firm become Boulton Paul Aircraft.

Bruce Robertson

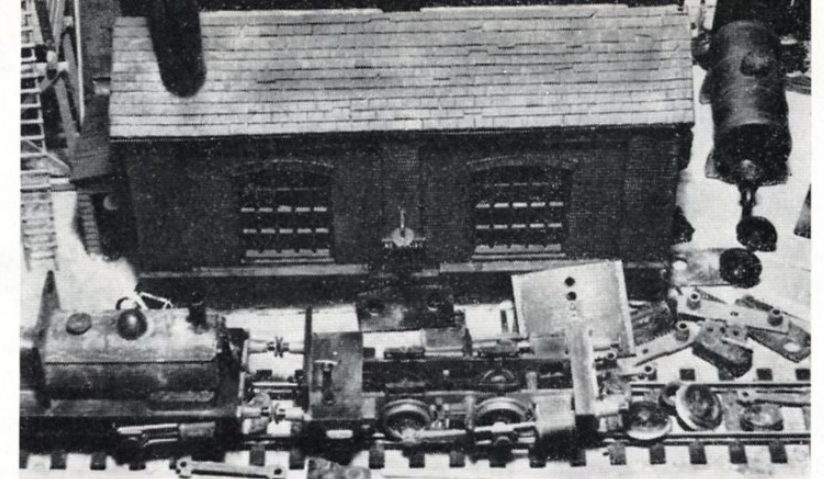


Above: Alan Hall's conversion article on page 279, dealing with the air-sea-rescue HC-130, mentions the alternative camouflage finish carried on some machines. An example is shown here, the aircraft having the usual tan/green/grey finish with matt black radome, small serial on fin, and USAF minstars.

AIRFIX magazine

WHY not scrap a loco or two for your engine yard? Now before you stop reading and turn to another article in disgust, dismissing my suggestion as all to drastic, let me assure you that I'm not recommending that you scrap part of your existing engine roster. Instead we will build up 'scrapped' locos from Airfix 'Pug' kits. This project is especially suitable for those of us who, before finishing one model, find it very tempting to start on some new kit to be assembled or some other job to be tackled. In this case we can leave the kit half built and achieve just the effect we want!

A loco awaiting repairs or undergoing alterations, or which has been scrapped, can make an interesting and



Scrapped locomotives in various stages of destruction are a common sight with current railway modernisation in full swing. In this article Michael Address suggests how the melancholy scene can be represented on a model rail layout. Here is the scrappyard siding at his own loco depot.

Making scrappyard locomotives

SIMPLE (AND TOPICAL) SCENIC FEATURE BY MICHAEL ADDRESS

rather unusual (on model railways, anyway) addition to your yard. You can model the engine at any stage you wish, from just after withdrawal from service through to total disintegration into a mere heap of parts, slowly rusting away.

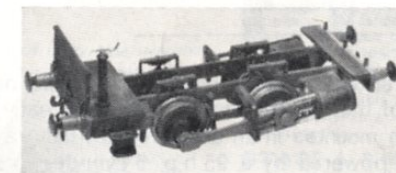
Using two Airfix 'Pug' kits I modelled one loco complete except for the cab, and another which has been dismantled leaving little more than the chassis. I used a third kit as a source of extra wheels and other parts (the kits are so reasonably priced it is well worth while buying this extra one as the parts scattered about add considerably to the overall effect). For the first loco I followed the kit instructions exactly except for the cab, the smokebox, and the couplings. I cut the steps away from the cab sides (Parts 14 and 14A) and installed the steps in position, discarding the rest of the side pieces. I cut the buffer beam from the cab back (Part 13) and fixed this beam in place across the rear of the mainframe. For the benefit of new readers I would like to mention that a razor saw is much easier and neater to use for cutting these parts than is a modelling knife; you are also less likely to cut yourself using a saw. I then fitted the cab front (Part 12), the regulator handle (Part 11), and the handbrake (Part 16) as shown in the kit instructions.

Before fitting the boiler front (Part 9) into place I cut carefully around the smokebox door to separate it from the

rest of the boiler front. This outer ring will be in two pieces which are then fixed in place at the front end of the boiler (Parts 8 and 8A). I then glued the door in the opening, leaving it in a slightly open position. I felt that this gave a little variety and also added to the 'out of service' appearance of the loco. I used the scale couplings provided (as this is a non-working model of a non-working prototype there is certainly no advantage in using the working couplings) and improved their appearance further by filing out the centres of the links using a round needle file.

The colour scheme is as described in the kit instructions, painting many of the parts before assembly for convenience and neatness. I used Floquil 'Grimy Black' paint for all black parts as this gives a matt weathered appearance. Patches of rust can be added as desired. Dust on white powder poster paint, brushing most of it off again, to give an even more weathered final appearance.

For the second loco I followed the



Above: The completed model of a 'scrapped' locomotive made from the Airfix saddle tank engine kit, with the added spring detail described here.

kit instructions for the mainframe assembly (Section 1 of the instructions) except that I only installed the front 5 mm and the rear 13 mm of the footplate (Part 7). I cut the steps off the cab sides (Parts 14 and 14A) and then fitted the steps in place. Next I cut the cab back (Part 13) down, discarding the part above the ridge across the cab back, and fixing the lower part in position. The front buffer beam (Part 10) is then fitted, followed by the buffers (Parts 18) and the couplings (Parts 17A—modified as for the first loco). The handbrake (Part 16) can also be added at this stage.

The final detailing is the addition of the springs above the axles. One of the photos shows the spring detail on a prototype loco (not, in fact, a 'Pug' but they are probably similar enough for our purposes) and the photo of my model shows the springs fairly clearly. I built the springs up from Slater's Plastikard Microstrip and while it takes a little time it is not as tricky to do as you might think, if you follow the method I am about to describe. I used thin strip 1½ mm wide for the leaves of the springs, cutting a strip about 70 mm long. This is fixed around part of the circumference of a tin of about 5 inches diameter (the exact size is not at all critical) using a piece of Sellotape to secure each end. This will give the necessary slight curve to the leaves of the springs. Next cut four sets, each of five leaves,

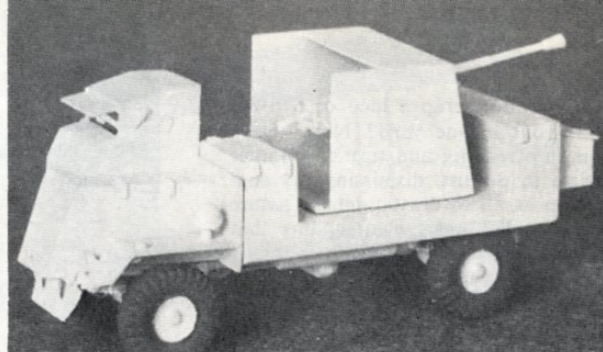
Continued on page 289

THE DEACON SP 6 pdr

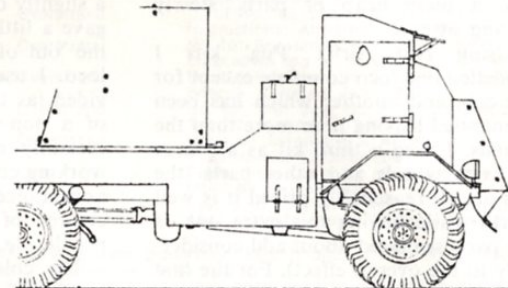
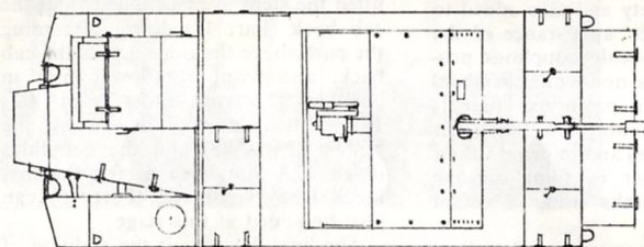
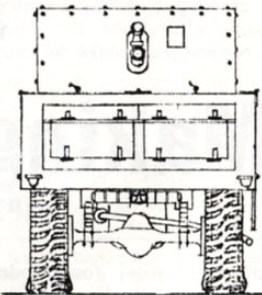
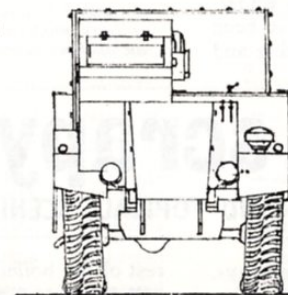
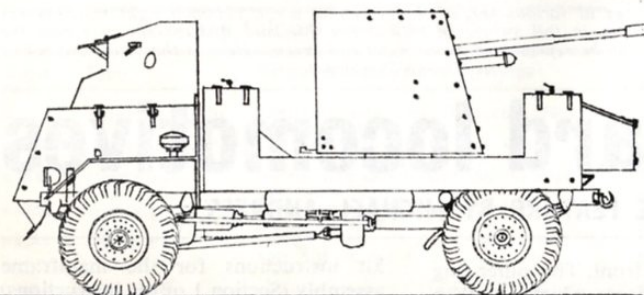
Drawn and modelled by G. W. Futter

THE Deacon was featured as a military conversion in the September 1966 issue but that is long out of print and we receive many requests for it to be repeated. The model we featured then was inaccurate in that it was depicted with a full cab instead of a half cab and detail was scanty due to lack of information on this vehicle. These definitive scale drawings give the Deacon as it should be and will enable modellers who made the earlier conversion to alter their models accordingly. New modellers can start here afresh.

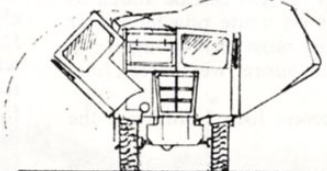
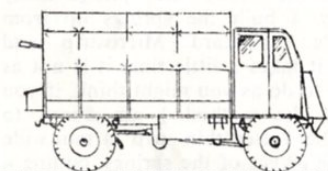
The chassis from the Airfix Matador kit should be used complete with wheels, fuel tank, and other parts, but the front tow hook assembly should be removed. The armoured body and gun shield are then fabricated face by face from flat plates, just like the full-size vehicles, using plastic card or even ordinary post card. All dimensions and parts can be traced direct from the drawing. It must be noted that



both sides of the rear end of the gun platform are identical. The 6 pdr gun can be taken from the Airfix Carrier kit or it can be made from scrap and sprue. The pivot for traversing can be made from a pin or sprue. The various hinges on the stowage boxes are best made from paper strips. A completed model is illustrated above.



The small scale (1:152) drawings below show how the Deacons were camouflaged with removable canvas screens to give the appearance of ordinary lorries during the preparations for the battle of El Alamein.



DEACON CARRIER, A.E.C., 6 PDR. GUN, MARK 1

Drawn by G.W.Futter—March 1969

Scale 1:76 (4mm.to1 foot)

The Deacon self propelled anti-tank gun was manufactured in limited numbers in 1942 and shipped to the Middle East serving there until the end of the North African campaign in early 1943. Basically the Deacon was a 6 pounder 57 mm calibre anti-tank gun mounted in an armoured limited traverse turret carried on a lightly armoured A.E.C. Matador 4x4 chassis powered by a 95 h.p. 6 cylinder A.E.C. diesel engine. In Middle East service the Deacons were painted overall in desert sand colour although at least one Deacon was over-painted with irregular black patches. The armour plate radiator fronts of some Deacons were painted to represent normal radiator grills as shown on the 1:152 front view.



The HC-130 makes an impressive conversion from the Airfix kit; this is the actual aircraft modelled by Alan Hall and drawn on the next page. Below: Detail view of the cockpit from the engineer's seat between the pilots' seats. Interior colour is light grey with orange seat cushions.

The HC-130 HERCULES KIT CONVERSION BY ALAN W. HALL

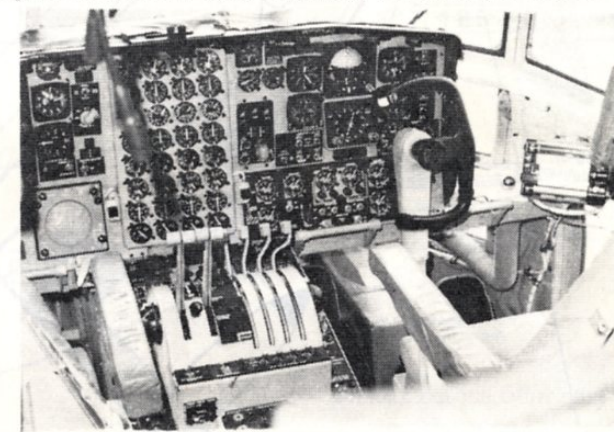
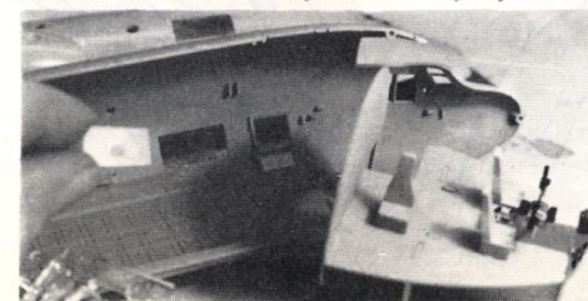
ALTHOUGH the Hercules is in service with many air forces throughout the world there is little the conversion enthusiast can do to alter the kit drastically in the same way that some other models can be changed to different variants and even entirely different types. Hercules variants have either three or four bladed props, different positions for air intakes and drop tanks plus one or two minor differences only. There is however one notable exception and that is the HC-130 air-sea-rescue version of the basic Hercules which requires a lot of alteration and can provide a considerable change of outline to the aircraft's otherwise well-known silhouette.

This conversion provides quite a challenge as the model itself is one of the largest produced by Airfix and the sheer size of the thing gives the modeller a few problems if he has to work on the kitchen table. Apart from this the model requires a new nose, mods to the fuselage transparencies, a radome of considerable size, and alterations to the tail unit.

The HC-130 Hercules is not a regular visitor to the UK and although some were stationed at Prestwick for a short while before the USAF moved its base away from that area I was not able to see one at close quarters. To make this model I have therefore had to rely on photographs and information supplied by the manufacturers which, although adequate for the purpose, were not detailed enough to enable me to make working nose 'prongs' which on the actual aircraft can be turned through 180 degrees so that they lie close to the fuselage sides when not in use.

The modeller has the choice of two entirely different paint schemes for this model. There is the Vietnam camouflage scheme and in the more complicated scheme of grey and silver with a large amount of black line work on walkways which can bewilder beginners with its complexity. I hope that the methods I have used therefore will give in the case of the latter scheme some indication as to how these difficulties might be overcome.

Below: The fuselage interior has been painted and large side windows cut out. New windows are made from the stems of Airfix kit stands.



STAGE 1 Although the interior fuselage detail on the kit is admirable there are one or two modifications that the model maker can incorporate which may help to make his work more distinctive. Amongst these is the provision of an extra seat between the ones provided for the pilots in which the engineer normally sits. Other modifications on the flight deck are a different arrangement for the flight instrument panel which is almost non-existent and in the real thing is much higher. The interior colour of these aircraft is generally a greenish-grey. I used Humbrol HI 5 with a touch of matt yellow to give the effect I wanted and this was painted before assembly of other parts was begun.

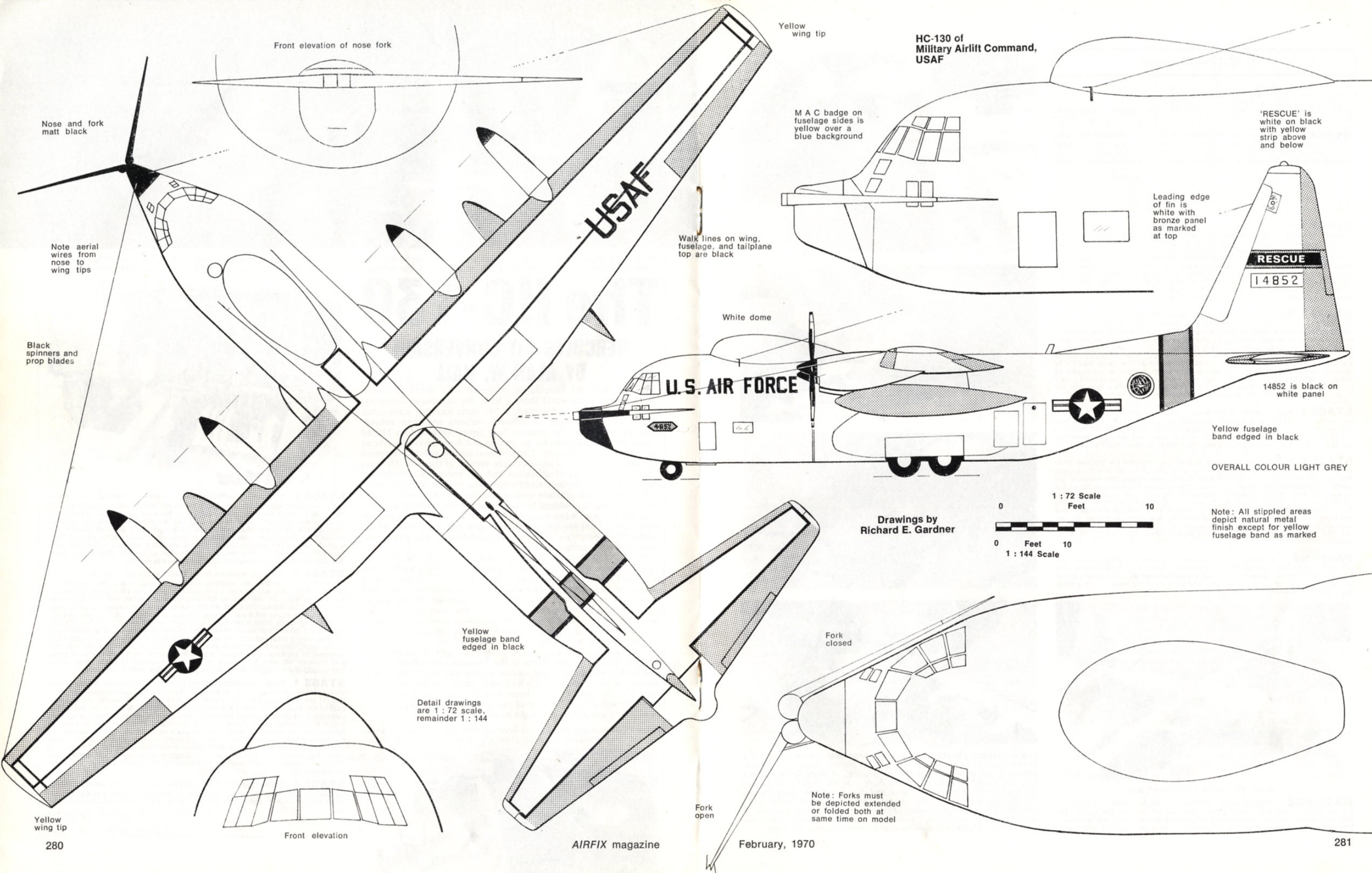
STAGE 2 The large windows in the fuselage side are then cut out. These extend between the first two porthole windows on each side of the fuselage and to remove the area not wanted I first stuck in place the kit transparencies and when these were dry the area to be removed was marked out and drill holes made round the edges. The clear transparencies were given a coat of body putty and the rough edges left from the new window cleaned up with a knife and file. Clear plastic stems from Airfix kit stands were used to provide the new glazing. Normally I do not use these, preferring a model to stand on its undercarriage, so there were a great many in my spares box. The area required was simply sawn off the stem, filed to fit and stuck in place. The contour of the fuselage was then reshaped by rubbing down the outside of the window with very fine sand paper and finishing off with 30 minutes of solid rubbing with Duraglit metal polish and a clean duster. The flight deck can be assembled during this time.

STAGE 3 Before assembling the two fuselage halves several ounces of lead shot needs to be placed in the nose area. There are two compartments on each side of the undercarriage well which will take this extra weight easily and I packed the lead shot in with Plasticine to prevent it rattling when the model was completed. Modellers should remember that both of the rear fuselage sections which hinge either up or down must be assembled at the time of sticking the fuselage halves together. Getting all the parts to fit in place when assembling the fuselage halves is also tricky. I allowed plenty of cement on each half before making the attempt as there is little time for mistakes. Even so the individual might have trouble in getting a perfect closed seam fit and I recommend that Sellotape or strong elastic bands be used to ensure that both halves of the fuselage join properly.

STAGE 4 Whilst the fuselage is drying out the rest of the assembly can be completed. The wings need no modification and apart from cleaning up the joints can be made straight from the kit. The tail unit is however different. Here

Continued on page 282

Scale drawings on next page



Nose and fork
matt black

Note aerial
wires from
nose to
wing tips

Black
spinners and
prop blades

Front elevation of nose fork

Yellow
wing tip

HC-130 of
Military Airlift Command,
USAF

M A C badge on
fuselage sides is
yellow over a
blue background

Walk lines on wing,
fuselage, and tailplane
top are black

'RESCUE' is
white on black
with yellow
strip above
and below

Leading edge
of fin is
white with
bronze panel
as marked
at top

White dome

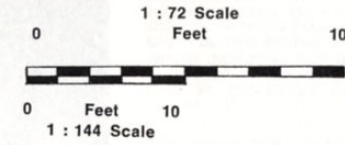
U.S. AIR FORCE

14852 is black on
white panel

Yellow fuselage
band edged in black

OVERALL COLOUR LIGHT GREY

Drawings by
Richard E. Gardner



Note: All stippled areas
depict natural metal
finish except for yellow
fuselage band as marked

Yellow
fuselage band
edged in black

Detail drawings
are 1 : 72 scale,
remainder 1 : 144

Front elevation

Fork
closed

Note: Forks must
be depicted extended
or folded both at
same time on model

Fork
open

The HC-130—continued

the rudder needs modification near its tip—the plan will show how much needs to be removed and the rest sanded until the aerofoil is returned. Similarly the extension to the fuselage beyond the tail unit is shorter on this version of the Hercules and I had to cut off $\frac{1}{2}$ inch and re-round the shape with a knife and file before the rudder could be put in place.

STAGE 5 The largest cutting and chipping job on this conversion is with the dorsal radar bulge. This can be made in no other way than from a piece of block balsa. I used one inch thick material, and the shape was traced from the plan and cut out with a fret saw. The external shape was cut first and roughly hewn into the correct contours. This then had to be fitted to the fuselage dorsal line and was achieved by using the coarsest sand paper available and spending an hour at least patiently sanding away until the wood fitted snugly in position. By now the fuselage had dried out sufficiently and the joints could be cleaned up. When complete the radome was stuck in place and the edges filled with a very small amount of body putty where they joined the plastic.

STAGE 6 Next came the nose radome. This too was cut from the same piece of inch thick block balsa after the plastic nose had been removed from the fuselage with a fine toothed saw. Both the wood and the plastic where the new join was to be made were given a coating of cement as the wood is very porous and then allowed to dry out thoroughly before carving. The cockpit canopy was put in place at this point and although it is an excellent fit there are always small amounts of filling needed to make the perfect match between the two parts. At this point I also cut off the two small projections on either side of the nose which represent the jacking points on the RAF aircraft. These do not appear on the Hercules under operational conditions and are best removed.

STAGE 7 Both radomes when finally shaped are given coats of clear dope and talcum powder filler and sanded smooth. Whilst this is drying I cut out the nose prongs. Because these are delicate parts of the model balsa is ruled out and they had to be made from scrap spruce taken from a previously built model where the cross section of the spruce is thicker than usual. Mine came from the Frog B-47 kit but individuals will doubtless have similar pieces in the spares box. In the subsequent carving operations the round section of the spruce had to be removed in the first instance. This was done by firmly fixing it in a vice and by using a coarse file scrape down each side to a square section. The desired length is cut off, and, with the coarse file to start with, and then with a finer one, the shape is slowly realised. 'Wet and dry' paper finished off the work.

STAGE 8 Both sections of the prongs are stuck together (there was no way which I could see to make them operable) and a square hole cut in the nose radome to accept the finished item. This was done with a sharp knife and judicious use of the drill. Finally the prongs were stuck in place and the tiny arms which act as levers to pull the prongs back into the 'closed' position stuck in place.

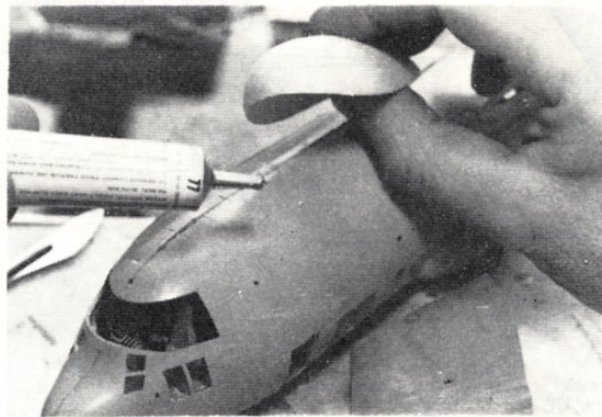
STAGE 9 Before fixing the wings in position I masked the fuselage port-holes and windows with Sellotape as these were difficult to get at subsequently and allowed me to paint right over them during later stages. The masking can readily be removed with the tip of a knife after painting and provides the means to keep the paint flowing smoothly without having to worry about missing the windows with the brush. Small details, such as aerials, were added to complete the constructional work before painting. Wheels were painted separately and not fixed in position until after the main painting had been completed. Under-carriage doors were also painted separately as the wheels cannot be fixed in position with these in the way. The rear loading door was fixed in the down position.

PAINTING The aircraft I depicted was in the grey and silver scheme with yellow and black rear fuselage band and white on the fin and dorsal radome. The grey I found to be the nearest colour match was Humbrol 40, silver came straight from the tin, and the white was a mixture of both gloss and matt to give a semi-matt appearance essential on the radome.



Above: The model after completion.

MARKINGS Completing the markings on this kit severely strained the resources of the spares box as they came from several sources. The black walk way lines around the grey areas caused the greatest problem but after experiment I found that a Letraset sheet No 557 provided just what I wanted, although it



Top to bottom: The dorsal radome has been shaped from balsa and is shown about to be stuck in position. Next picture shows how the nose radome is cut to allow room for the 'prongs'. A sharp knife and drill have been used to make the hole. Note that the flight deck canopy has been stuck in place. The nose and dorsal radomes complete and the 'prongs' in position. Note the small struts behind the latter which simulate the operating levers. Final operation before painting is sticking the wings in position. All transparencies have been masked with Sellotape to ease problems during painting.

AIRFIX magazine

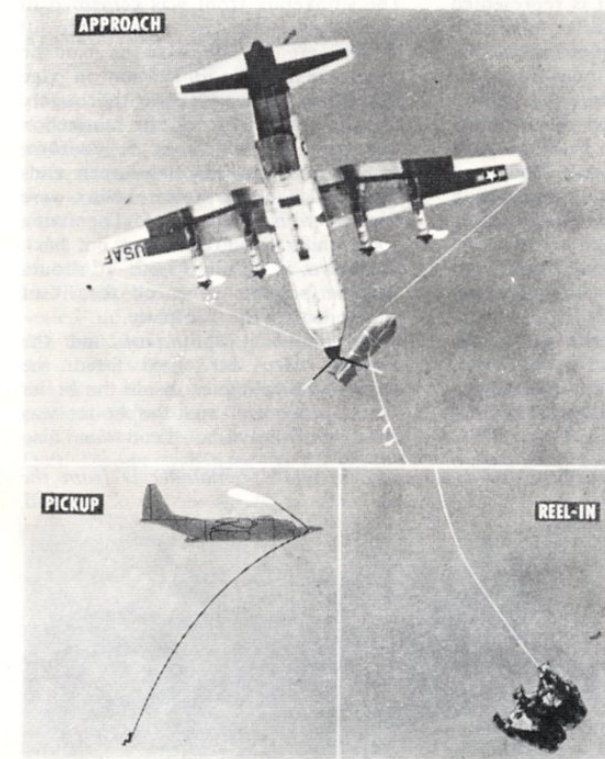
cost 8s. 6d. The sheet had sufficient lines of the right length and I found that once started the problem was quickly solved and the appearance first rate. Despite its initial high cost, incidentally, the Letraset sheet does provide enough lining for use on other models as well.

The black outline to the rear fuselage yellow band had to be cut from transfer sheet: similarly the red lines marking the propeller danger area came from this source.

Luckily I had a spare transfer sheet from a Monogram Grumman Albatross kit in the spares box and this provided me with many of the other items. The Military Airlift Command insignia with suitable modification with yellow paint was the greatest find and I must admit that I would have hated to have to paint this item by hand. The national insignia I took from the AIR decal sheets. These are first class transfers and add considerably to the finished model. In all the conversion took three weeks of evening work to complete which makes it one of the longest conversions, as far as time goes, that I have completed recently. A major time-consumer, however, was waiting for paint to dry whilst not being able to proceed with anything else.

The photograph of Norwegian marked Sopwith Babies which appeared on pages 128 and 130 of our November 1969 conversion article by Alan Hall were in fact from Knut Arveng, IPMS-Norway, and not from Paul Leaman as stated in the credits.

Below: For those who wonder how the Hercules HC-130 operates in the air-sea-rescue rôle, the official picture montage gives a good idea how it's done. The ditched airman afloat in his dinghy has a balloon and cable as part of the survival kit provided. He attaches one end of the cable to his harness and pays out the balloon on the other end of the cable. After spotting the airman, the HC-130 flies deliberately at the cable just below the balloon aiming to hit it with the prongs. On contacting the cable the prongs automatically snap shut and hold the cable securely. The airman is thus whipped at high speed from the sea and the cable is trailed aft in the slip stream below the belly of the aircraft. It is then grappled from within the cargo hold, the bight of the cable is hooked to a winch and the airman is hauled up to the aircraft and lifted in through the ramp. Mostly, however, the HC-130 operates in the more conventional rescue rôle, carrying a comprehensive outfit of survival gear which includes food, life rafts, flares, etc. It also carries a 'para-medical' team who can be dropped to assist survivors over land or sea.



February, 1970

NEW BOOKS

REVIEWED FOR MODELLERS

Russian tanks

FIGHTING VEHICLES OF THE RED ARMY, by B. Perrett. Published by Ian Allan Ltd, Terminal House, Shepperton, Middx. Price 25s.

THIS is the first book published in English to our knowledge giving any specialised coverage of Russian tanks. It covers a vast subject in a relatively small number of pages (about 100) so understandably it is a little brief in parts. However, it manages very nicely to give a good overall picture from the beginnings of Russian armour development to the present day with the last two chapters dealing with gunnery and tactics and training respectively. Where this book would have gained immeasurably would be in the matter of illustrations. It could have done with another dozen at least (and would have been worth the extra price), for at present it gives no pictures of numerous important types. For instance there is a complete chapter on special purpose types like bridgelayers and mine-sweepers with not a single picture or sketch of these. Conversely at least two early vehicles are pictured which are barely mentioned in the text while two pictures of the JSU 122 are included which we would swear to be the same, the one being a poor 'fuzzy' copy of the other but from a different source! This reservation apart this book is excellent value for money and well worth adding to the AFV enthusiast's library. We hope the publishers might be persuaded to add more pictures in any future edition.

In Steam

STEAM LOCOMOTIVE, by O. S. Nock. Published by George Allen & Unwin Ltd, Park Lane, Hemel Hempstead, Herts. Price 45s.

THIS is an excellent summary of British steam locomotives from 1830 to 1968. First published in 1957 when BR announced their intention to cease building new steam locomotives, the second edition includes four new chapters to bring the story to finality. O. S. Nock writes knowingly and entertainingly about the locomotives themselves, their designers, the men who operated them and the growth in rail transport which either inspired or, resulted from, their development. There are 33 pages of illustrations and 273 pages of text.

STILL IN STEAM, by G. M. Kichenside and R. C. Riley. Published by Ian Allan Ltd, Terminal House, Shepperton, Middx. Price 10s 6d.

RAILWAY and steam locomotive preservation is still in a very fluid state. New preservation schemes continue to come into being whilst existing ones are struggling to survive and one needs to be a pretty keen enthusiast to keep abreast of them all. This is a timely publication which illustrates in words and pictures the current scene. The one criticism is that nearly one third of the 64 pages have been used for thumbnail histories of the past which seems out of place in a book devoted to the present.

German bombers

GERMAN BOMBERS OF WORLD WAR TWO, VOLUME 2, by Alfred Price. Published by Hylton Lacy Publishers Ltd, Coburg House, Sheet Street, Windsor. Price 30s.

THE publishers of the 'Men and Machines' books are now becoming well-known amongst aviation enthusiasts of second world war aircraft for their well informed and different style of presentation which makes top rate reading apart from providing the essential details of the aircraft illustrated.

The second volume on German bombers written by Alfred Price is no exception. In this he details five lesser known aircraft such as the Arado Ar 234, Dornier Do 217, Heinkel He 177, Junkers Ju 188 and the Mistletoe pick-a-back combination. In each case the aircraft

Continued on page 299

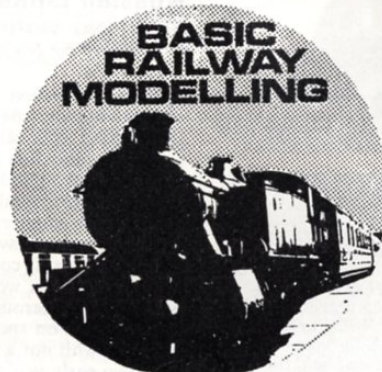
D49 Class

ANOTHER CONVERSION

FROM THE AIRFIX 'SCHOOLS'

SUPERFICIALLY, there is a strong resemblance between the Southern Railway 'Schools' Class and the LNER D49. To begin with, they are both three-cylinder 4-4-0s. The cylinder dimensions are very similar; 16½ inch × 26 inch in the 'Schools' and 17 inch × 26 inch in the D49. There is only an inch difference between the diameter of the coupled wheels; the 'Schools' being 6 ft 7 inch and the D49 6 ft 8 inch. They both have the same coupled wheelbase of 10 ft, but the boiler, firebox and smokebox are shorter in the D49 but there is only ¼ inch difference in the boiler outside diameter. Both locomotives have round topped fireboxes and, in appearance at least they both have parallel boilers, both pitched 9 ft above rail level. Perhaps the most noticeable difference is the shorter boiler of the D49 and the bogie wheelbase which is 7 ft 6 inch on the 'Schools' compared to 6 ft 6 inch on the D49. To convert the Airfix 'Schools' kit into a D49 is, therefore, a distinct possibility and a useful conversion for LNER fans.

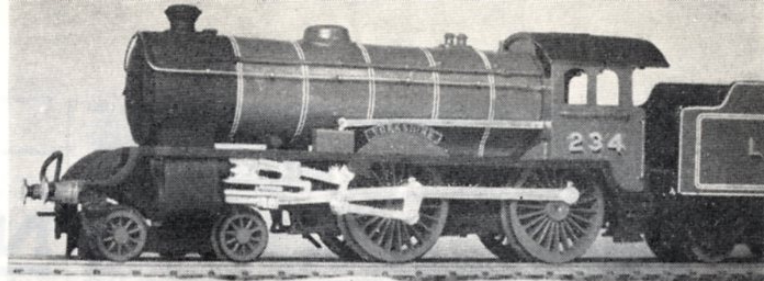
The conversion about to be described is for a non-motorised model but I would imagine that a motorised conversion would present no more difficulty than a motorised 'Schools' for which there is readily available the Simplas chassis conversion kit produced by Wilro Models Ltd. Assuming, therefore, a non-motorised model, I suggest constructing the model in the order of the Airfix 'Schools' Class Instruction Sheet, which begins with the chassis. Very little modification needs to be made to the mainframe,



BY **NORMAN SIMMONS**

parts 1 and 1A. One noticeable difference with the D49 is that it does not have the pronounced sandbox between the coupled wheels that is represented on the Airfix mainframes so this detail together with the sandpipes should be removed. After this simple modification the remaining operations from 1 to 15 can be completed as described in the Airfix instruction sheet.

Now, turning to Stage 2 'Body and Bogie Assembly', the first modification required is removal of the narrow splashers which connects the two coupled wheel splashers above the footplate. There is no such feature on the D49. I used a Junior Eclipse hacksaw blade and craft knife to cut the splashers away and filled in the resultant hole in the footplate with plastic card. Two further modifications to the footplate are shown in Fig 1. The



A further LNER locomotive conversion possible from the Airfix 'Schools' kit is the very attractive 'Hunt' or D49 class which is easier than the B1 described last month.

boiler is the next major modification and here I must refer to the drawing, Fig. 8, shown on page 166 of the December 1969 AIRFIX magazine in my article describing the B1 conversion. Referring to this drawing, parts A, C and E are used to make the D49 boiler. The two sides were assembled first; all vertical pipes, the chimney and the plastic handrails were removed and holes drilled with a No 71 drill to take the handrail split pins. The position of the handrail knobs is shown in Fig 2. The two halves of the boiler were then cemented together.

The Airfix 'Schools' smokebox front was radically altered by removing the six fixing bolts around the door, the handrail and the numberplate and cutting away the base to form a complete circle. This is identical to the B1 smokebox which was illustrated in the December issue. The smokebox front was cemented in place and plastic card was used to fill in the gap at the base as can be clearly seen in the illustration on page 165. When the cement was thoroughly dry the lower part of the smokebox was cut and filed away to conform with Fig 2. The resultant open ends front and back of the smokebox were covered with plastic card. The fixing point under the firebox was cut back as shown at 'X' in Fig 2. It should now be possible to check the fit of the boiler to the footplate.

The handrail split pins and the handrail wire were next fitted, the ends of the split pins inside the boiler were opened up, and the boiler was filled with Polyfilla. Lead was also

Drawings full-size for model
All dimensions in millimetres
Fig. 1

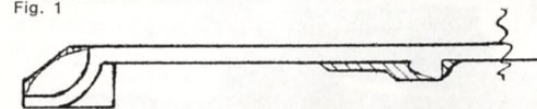
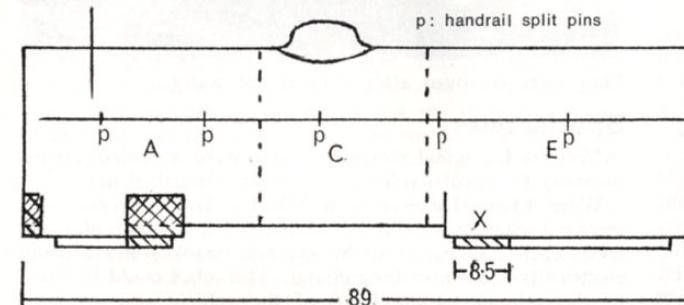
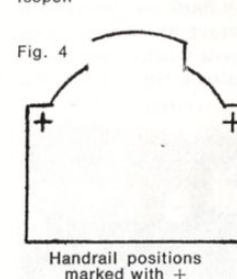


Fig. 2
Centre-line of chimney



Remove shaded portions, then fill cross-hatched area with Isopon



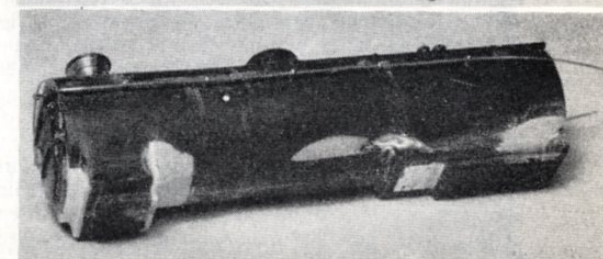
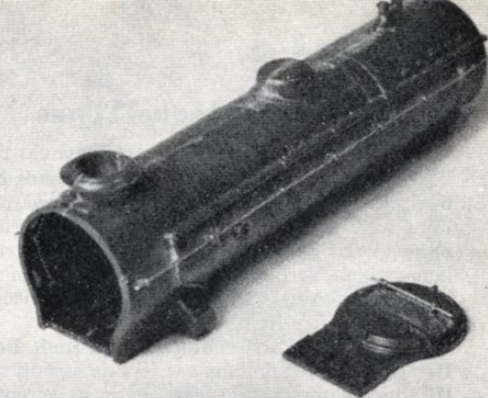
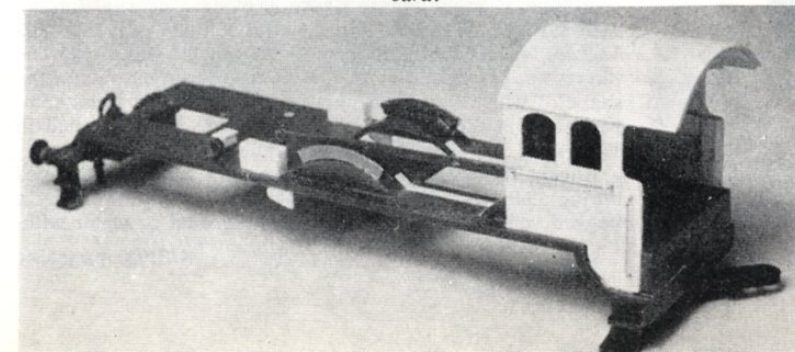
Above: Drawings are keyed to references in text.

inserted in the firebox end to provide maximum weight over the coupled wheels. Self-adhesive tape was stuck over the larger chimney and smokebox openings to prevent the Polyfilla slipping right through but the smaller holes in the boiler side were quickly sealed by the Polyfilla. The chimney and smokebox holes were afterwards sealed up with Isopon which when dry was filed smooth. The grooves in the lower sides of the boiler designed to clear the tops of the splashers needed amending since the firebox and boiler sits further forward on the D49. Isopon was used to fill in the

unwanted grooves and new ones were carved out with the craft knife. A new chimney, actually one intended for a J39 was all I could get, was purchased from Eames and glued in place with Britfix Epoxy Resin.

The footplate can be finished off by fitting a mechanical lubricator on the nearside and two box-shaped valve covers 8.5 mm long by 5 mm high just forward of the leading splashers on either side. The boxes were made from a lamination of 3 pieces of 30 thou plastic card and the lubricator as made up from scraps of plastic card. The Airfix reversing lever

Below: Close view of the modified footplate and the new cab built from plastic card.



Top: Two stages in boiler alteration showing handrails and Isopon filling. Above: Typical D49 locomotive was No 2755 Berkshire.

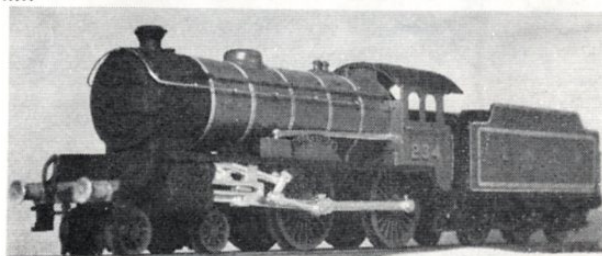
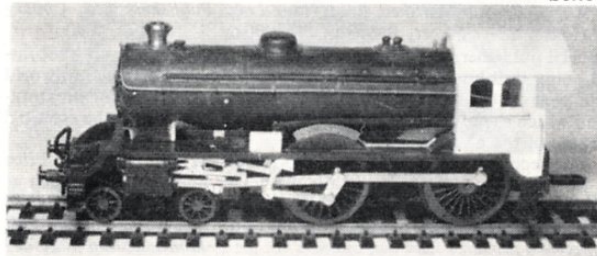
was reduced in length to 49 mm and cemented, the rear end to the cab and the front end to the inside of the nearside valve cover. The bogie wheelbase was quickly modified to the scale 6 ft 6 inch by removing a 4 mm section from the centre of each side and re-assembling with the bogie stretchers re-positioned to clear the pivot pin.

The cab sides, Fig 3, were scratch-built with 30 thou plastic card and a lamination of two thicknesses of 20 thou plastic card curved and cemented together formed the roof. The Airfix cab front was modified by cutting the top and sides away to leave just the outline of the boiler and a new cab front as shown in Fig 4 was cut from plastic card and cemented to it. The cab front should be fitted 26 mm from the rear end of the footplate.

If the pre-war LNER lined green livery is to be applied it helps considerably to paint the locomotive in three sections; (1) mainframe and

Continued on page 289

Below: The completed model shown before and after painting. Plastic card parts are in white, remainder is from the 'Schools' kit.



Part 8: Miscellaneous Types

WITH suitable conditions carriers could be floated across water gaps with their full battle loads by either of two methods. Before flotation sets were fitted, certain preparations were necessary to waterproof the carrier. This applied more to the earlier marks of Universal Carrier than to the later, which were constructed with flotation in view, having a lighter welded hull. The different devices are described here.

Attachment, Carrier Flotation, Assault Boat, Mk II and III: A design for floating carriers on assault boats Mk II and III which showed great promise on its acceptance trials, this was perfected and made ready for production. The carrier was supported in the water by two assault boats; these were fixed with a set of equipment known as 'Attachment Mk I, Carrier Flotation (Assault Boat)'. The sets were adjustable and it was possible to use them with either mark of assault boat.

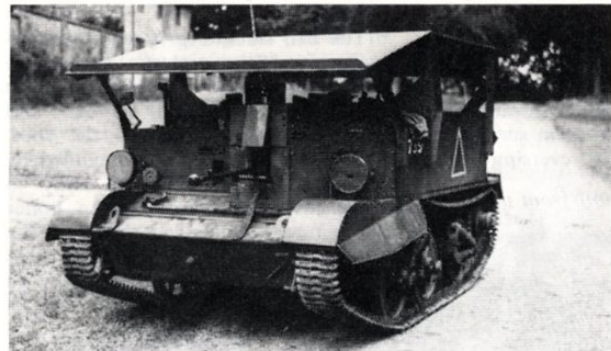
Essentially the set consisted of two light steel beams which spanned the carrier hull and were fixed to it by quick-action attachments. These beams projected a boat width either side of the carrier hull and had webbing straps, which held the boat up when travelling across country, and tubular members to transfer the load to the boat bottom when floating. The carrier propelled itself in the water by its tracks; the steering being assisted by a man with a paddle in each assault boat.

Attachment, Carrier Flotation, Kapok, Mk I and Mk II: This equipment consisted of brackets for attaching kapok floats to the carrier to enable it to float. The Mark I flotation set consisted of eight special brackets for attaching nine kapok floats to the Carrier Universal Mk I.

The Mk II set consisted of ten brackets and was designed to fit all carriers except the T16, which required special rear brackets, and the AOP Mk III from which the charging engine at the rear had to be removed.

Improved Floating Equipment: Various methods using local material to improve floating equipment for the carrier were used. These consisted of petrol tins, oil drums, timber and tarpaulins, etc. The success of the equipment depended on the ingenuity displayed in its construction and of the selection and positioning of the material.

Carrier, Universal, with heightened hull: Carrier, Universal fitted with a heightened superstructure and water-tight hull permitting deeper wading. Used extensively in the Normandy landing, the existing carrier superstructure was fitted with brackets into which the extension panels fitted.



Above: One of the attempts to improvise better protection for the Universal Carrier dated back to the post-Dunkirk period in 1940 when an armoured roof was fitted to some carriers for a time. Intended to counter air strafing, it was soon discontinued.



They were removed after clearing the water.

Special roles

Various Universal Carrier models were modified experimentally for special roles and these are described here.

Wasp Flame-Thrower with MBSD: The multi-barrelled smoke-discharger (MBSD) consisted of a number of small tubes each holding a No 80 grenade (smoke) and a small electrically-fired propelling charge. The tubes could be fitted to the side or to the front of the vehicle and arranged radially so that the grenades were projected simultaneously to fall some 50 yards in front or to the flank of the vehicle in a fan-shaped arc of 120°. The discharger was operated by the vehicle commander by a control switch fitted inside the vehicle. An eight-barrelled type was also designed for the



A Universal Carrier with Stacey towing attachment hauls a 6 pdr anti-tank gun of an infantry anti-tank platoon as depicted in the Airfix Carrier kit (Imperial War Museum).

Wasp flame-thrower universal carrier to assist it to close on its target. This was used by the First Canadian Army.

Smoke Screening Apparatus for Mounting on Carrier: This was a low pressure spray apparatus consisting of two 5 gallon drums of charged CSAM with an air inlet feed, ejection pipe and manual air pipe. It was stowed in the rear stowage compartment behind the driver. It could be fitted by the crew and required no drilling. It was developed and put out for troop trials during the summer of 1943.

Carrier Ambulance: Used by the armoured units, this was the Universal Carrier modified with lengthened superstructure and open rear ends to allow a stretcher to be carried each side of the engine casing. Standard carriers were also used, the stretchers being laid across the hull top and a red cross flag being shown.

Universal Carrier, Anti-Aircraft: This was an experimental prototype of an anti-aircraft version of the Universal Carrier with a special all-round traverse turret fitted with two .303 Vickers 'K' air-cooled machine guns and special sight. The turret was mounted over the gunner's compartment, the shape of which had been suitably altered. The driver's compartment on the right was also modified. Though tested in 1940-41, it was never placed in production.

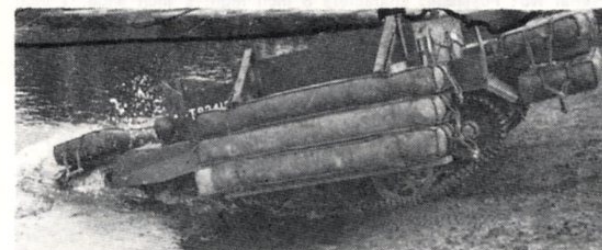
Rocket Assisted Egress on Universal Carrier: Developed during 1946, this device was devised as a means whereby a bogged vehicle could be extracted from mud or water with-

out the use of special recovery equipment. Two special 5 inch rockets were fitted to each side of the carrier and when fired the thrust of the rockets propelled the carrier forward out of its bogged position.

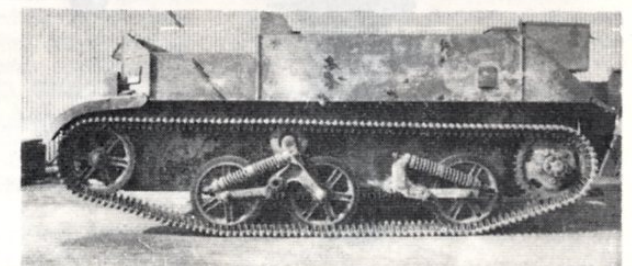
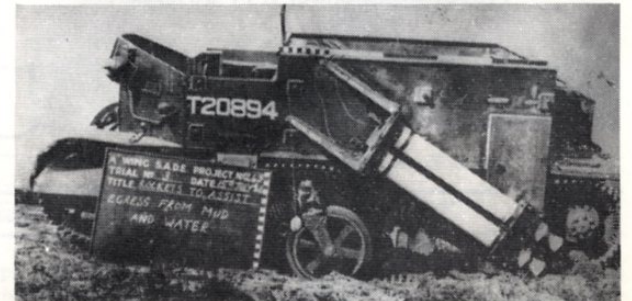
Gutted Carrier; For Attachment to Tanks: The gutted carrier was the armoured shell of a normal OP or Universal Carrier riding on its suspension. From the carrier's interior all equipment had been removed, including the engine, steering, seats, etc. The gutted carrier was towed by means of two Hollebone draw-bars with an articulating eye. It could be towed at between 10 and 15 mph on the road and was capable of carrying two tons of stores. This conversion was the result of success achieved with armoured sledges used by AVREs but was developed too late for use during the war.

Universal Carrier with attachment for towing Artillery: In 1943 it was decided to fit the Stacey towing attachment to all new carriers coming off the production lines. The attachment was put into production because it was considered operationally essential that all carriers should be capable of towing the 6 pdr anti-tank gun short distances in an emergency. The attachment was also fitted to some earlier models of the Universal Carrier but not the Armoured OP vehicles.

Universal Carrier with Armoured Roof: The need for protection against aerial attack, considered necessary after experience in France in 1940, led to the fitting of light armoured roofs to some carriers of the Yeomanry Armoured Detachment in the United Kingdom during the invasion scare in the Summer of 1940. This idea was soon abandoned due to the crew's restricted vision and field of fire, and the added weight of the armoured roof which had an adverse effect on performance. The idea was devised by the Gloucestershire Hussars who were equipped with carriers instead of tanks at a period of grave tank shortage.



Top: A Universal Carrier Mk I with heightened hull shown after coming ashore on the Normandy beaches, June 6, 1944. The front segment of the hull side extensions has already been discarded to give the driver forward vision. **Above:** Attachment, Kapok, Flotation Mk I on test (Imperial War Museum).



Above, top to bottom: Carrier Ambulance of a New Zealand armoured regiment in Italy (NZ Official). Carrier with Rocket Assisted Egress attachment. Universal Carrier Mk I with Stacey towing attachment hauling trailer. Note the brackets which are for the heightened side extensions shown in the picture on left. Reader Bert K. Furman of Gardena, California, USA, sent us this view of the Carrier he has recently acquired for preservation. It is a Carrier MG, Local Pattern No 24, chassis number 2635 built by South Australia Railways in 1942. This view shows well the welded superstructure of this Australian-built type.

CROSS AND COCKADE, GREAT BRITAIN

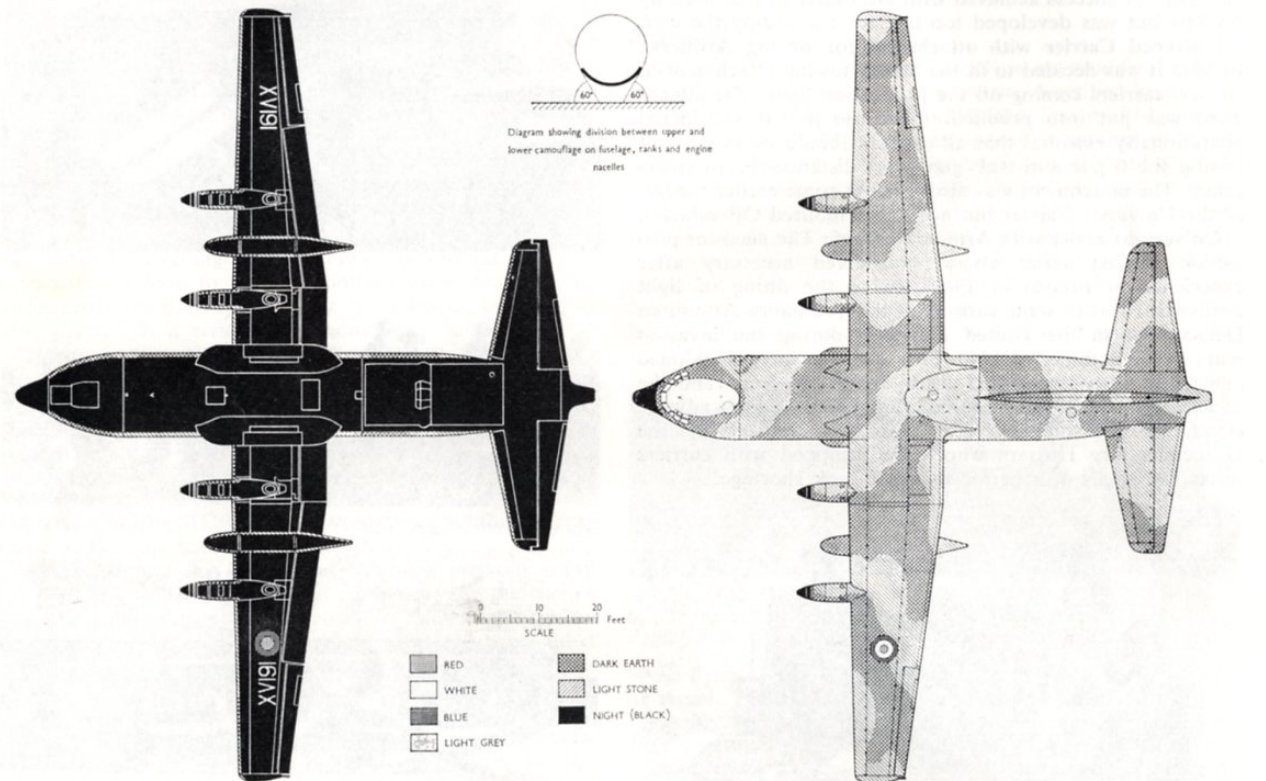
THERE is now an active branch of this American-founded society in Great Britain. The branch holds regular two-monthly meetings in a central location and publishes a regular newsletter and, from this year, a quarterly magazine.

This is not a modelling society, but if you are at all interested in the aircraft of the first world war, then membership is a must.

The British branch is at the present small but its members are very enthusiastic and anxious to expand their numbers and activities. Why not write to the membership secretary for details, the address is: Paul Leaman, 17 Cranleigh Court, Cove, Farnborough, Hants.

RAF HERCULES COLOUR SCHEME

Drawings by A. M. Alderson
Notes by Michael J. F. Bowyer



MANY readers have written to ask for confirmation that the camouflage pattern applied to the RAF Hercules is as we depicted it in our issue of November, 1967, and reprint again here. This we now confirm, and if you want your Airfix Hercules model correctly camouflaged you should follow these drawings, which were based upon those used to apply the paintwork by Marshall of Cambridge.

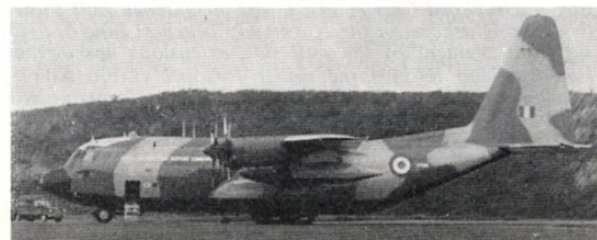
Since we visited 36 Squadron in August, 1967, there have been no changes to the patterning. The paint scheme applied in polyurethane was indeed intended to be very long lasting. In the closing weeks of 1969 Hercules appeared with white numbers on either side of the nose, and above the fin stripe this being the aircraft's 'last three'. The Hercules OCU at Thorney Island has long been carrying such numbers on the noses of its aircraft. Some of the Hercules have had minute dayglo adornments—XV291 for instance has a small dayglo red aircraft positioned aft of its fuselage port serial. Another has a dayglo strip on the fin leading edge and yet another had its 'last three' in dayglo above the nose.

XV196 can be seen in one photograph to have almost been painted as directed by the drawing—but not quite. Note the variation on the forward fuselage. XV218 and '179 can also be seen to have minor differences.

If you wish for your model to have an up-to-date appearance then

The following notes apply to the Hercules as delivered to the RAF.
Roundels: Fuselage and above port wing—red 18 inch diameter, white 36 inch diameter, blue 54 inch diameter. Under starboard wing—red 27 inch diameter, blue 54 inch diameter.
Fin flash: 36 inch x 24 inch high, colours equally divided.
Serial No: Fuselage, characters 8 inch high, 5 inch wide, 1 inch stroke, 1 inch spacing. WHITE. Under wings, characters 36 inch high, 22½ inch wide, 4½ inch stroke, 3 inch spacing. LIGHT GREY.
Command designation: ROYAL AIR FORCE AIR SUPPORT COMMAND or ROYAL AIR FORCE FAR EAST, characters 8 inch high, etc. WHITE.
Aircrews: 6 inch at tips golden yellow.
Walkway boundary: ¾ inch diameter dots on approx. 24 inch pitch. CANARY YELLOW (shown black on drawing).
Walkway: Matt, non-skid finish, including roundel.
Engines: Camouflage pattern identical on all nacelles.
Tanks: Camouflage pattern identical on tanks and pylons. Also identical on inboard and outboard sides.
Leading edges: Upper surface camouflage continues to line 6 inches back from leading edge of mainplane and tailplane on underside.

Below: XV196 in the summer of 1967.



you must replace the astrodome with a hatch since the dome was removed in one of the modifications ordered on the aircraft.

This seems an ideal moment to re-cap on the Hercules markings. XV177 was the first machine to emerge in the RAF paint scheme and was first flown on February 18, 1967. XV177 and '178 were unusual in one respect—being A & AEE aircraft they have never carried the Air Support Command legend. During their use as dropping trials and 'mod' programme aircraft they have sometimes worn black and white checks on the rear fuselage. For some months the Hercules aircraft left the works bearing ROYAL AIR FORCE TRANSPORT COMMAND on the fore fuselage, but from August 1967 had the legend up-dated. Aircraft 1, 3–22, 35–66 bore eventually ROYAL AIR FORCE AIR SUPPORT COMMAND whereas nos 23–34 have worn ROYAL AIR FORCE FAR EAST (ie, on the batch beginning XV197). There was talk some time ago of the aircraft having a matt finish, but basically they retain the glossy paint work which is less glossy now.

Top right: XV179 in the autumn of 1967, an OCU aircraft with nose number. Above right: XV218 as seen in September, 1969, with astro dome still fitted. Its paint pattern differs slightly from XV179.



More RAF Hercules pictures on pages 264-5

D 49 class — from p. 285

Prototype information regarding the D49s is somewhat complicated and cannot be summarised satisfactorily within the confines of this article which is intended to cover the constructional side. I recommend the *Railway Modeller* for October 1966 which contained an excellent drawing and *Trains Illustrated* for February 1957 which had a well illustrated 6-page feature.

Tenders for the D49s are also a complicated subject since at least five different varieties were used at different times; LNER 4200 gallon both flared top and flush sided (the latter as described in last month's issue), NER 4125 gallon and GCR tenders some of which were rebuilt with flush sides. Numbering was also haphazard mainly three-figure numbers ranging from 201 to 377 being used although eight D49/1s were numbered 2753-60 when built in 1929. After the LNER renumbering scheme of 1947 consecutive numbers from 2700 to 2775 were allocated to the class, 60000 being added to the numbers after nationalisation.

Nameplates currently listed in either Eames, Hobbytime or King's Cross nameplate lists include: D49/1 234(2700) *Yorkshire*, 251(2701) *Derbyshire*, 245(2710) *Lincolnshire*, 246(2712) *Morayshire* (this locomotive is the one member of the class now preserved), D49/2 238(2757) *The Burton* and 357(2762) *The Fernie*. My model shows LNER No 234 *Yorkshire* fitted with a standard LNER flush sided 4200 gallon tender. My eventual plan is to fit this model with a motorised tender though at present it has a 'dumb' unmotorised one.

February, 1970

Scrapped locomotives—from page 277

from the Microstrip, each set consisting of one leaf each of 9 mm, 8 mm, 7 mm, 6 mm, and 5 mm length. For each spring glue the 9 mm leaf down to the strip bent around the tin, followed by the 8 mm strip (fixed so that it is ½ mm in from the ends of the 9 mm leaf at each end) and so on with the other strips in turn.

The sets of leaves should be so positioned on the long strip that this long strip can be cut so as to leave the top leaf of each spring which this long strip will form) with a length of 10 mm. You will find that if you allow the cement to harden before cutting into the four separate springs, each spring will retain its slight curve. All this may sound a little complicated but I can assure you that it is easier than it sounds, and certainly much easier than to attempt to build up each spring separately.

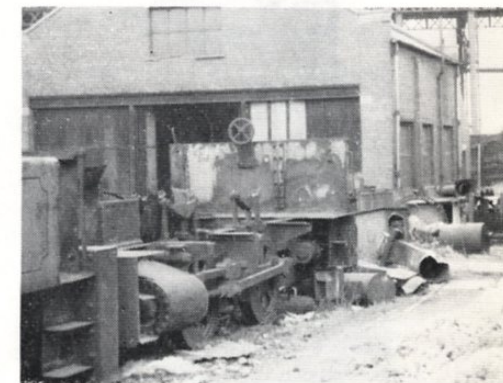
Using 1 mm wide, thin Microstrip fit a piece vertically at the centre of each side and another piece across the top of each spring to cover the tops of the pieces at the sides. Next, using rather thicker Microstrip 1½ mm wide fix a strip at the inside of each main-frame side frame above each axle and further pieces of the same material across the top edges of the mainframe and the tops of the pieces you have just fitted inside the frames.

The four springs are each supported by two pieces of scrap plastic, each approximately ½ mm by 1 mm by 3 mm long, fitted vertically, one beneath each end of the spring, with their lower ends fixed to the top of the mainframe so that the centre of the spring is above the axle. Add a small piece of plastic to fit between the centre of the lowest (that is the

shortest) leaf of the spring and the piece fixed across the top of the main-frame above the axle. Reference to the photo of the prototype loco chassis which shows the spring details quite clearly will help you to follow the above description. If you want to save time you can omit the springs, but I feel that they add a nice extra detail to the chassis and are well worth the work involved.

The two locos can be left on an unused siding near your engine shed and railway workshops. My second prototype photo shows the sort of bits and pieces that are left lying around near these sidings; you can really let yourself go here if you wish, with spare parts, pieces of wood and corrugated iron, old oil drums, and spare pieces from previous conversions scattered around. I have included a photo of my two models in a setting of this sort, with many of the left-over parts in evidence.

Below: The typical scrapyards scene in real-life which provided the idea for this article and the setting depicted in model form in the heading picture on page 277.





The British Army '14-18

UNIFORMS AND REGIMENTS
DESCRIBED
BY DAVID NASH

Part 8: RN, RNAS and RFC

NO coverage of the British Army would be complete without taking into account the other services. Since sailors fought in the trenches of the Western Front they cannot be ignored and owing to the great interest in aero modelling it is perhaps time that the aviators' dress received some attention.

Upon the outbreak of war in 1914, a pre-war plan was put into operation which resulted in the formation of a four battalion brigade of Royal Marines. The intended object of this unit, which was controlled by the Admiralty, was the seizure and protection of possible port facilities which may have been required by the fleet.

By mid-August 1914 it had become apparent that a large number of naval reservists could not be gainfully employed on board His Majesty's ships and so, on the 16th of that month, the Admiralty ordered the formation of two Royal Naval Brigades. In these two events can be seen the origin of the Royal Naval Division.

These naval brigades were organised on a four battalion basis. The Royal Marines drew battalions from each of

the Royal Marine Light Infantry divisions and one from the Royal Marine Artillery depot. These units were known by their pre-war stations, Chatham, Portsmouth, Plymouth and Deal. The Naval battalions were numbered as well as being named. The 1st RN Brigade contained the 1st to 4th Battalions and the 2nd the 5th to 8th, they were named, in sequence, Drake, Hawke, Benbow, Collingwood, Nelson, Howe, Hood and Anson. Each battalion had an establishment of 937 officers and other ranks.

On August 26, 1914, the Marine Brigade was dispatched across the Channel to Ostend, from whence it returned on September 1. This was two days before the formation of the RN Division. The Division fought as a unit in the defence of Antwerp in September and early October where it suffered some 3,000 casualties due, some critics said, to inadequate training and hasty organisation. The division was withdrawn to England where it was re-equipped and thoroughly trained in land warfare before it was committed to the Dardanelles Campaign. In July 1916, the RN Division again landed in France and was engaged in the early engagements of 1914 (eg, the Defence of Antwerp). Below: The leather equipment worn by RN ratings and shown in the picture (Imperial War Museum).



gaged in that theatre until the end of the war.

Upon arrival in France, the division passed to the control of the War Office who numbered it 63; the brigades were numbered and it was given a full complement of artillery and machine gun companies, etc, and absorbed into the army as an infantry division. The third brigade, the 190th, was composed of soldiers for the last two years of the war and during this period the number of battalions within the brigades was cut to three.

The Royal Marines fought their first actions of the war in dark blue uniforms, their headwear being the Brodrick* cap. The Brodrick was round topped, piped with scarlet, and the cap band, which was also scarlet, was partly obscured by side flaps which were turned up. This cap was detested since it proved almost impossible to stow it in a pack without flattening it and it had been abandoned by the army some years prior to the outbreak of war. During the defence of Antwerp the RM wore khaki uniforms of the army's 'Service dress, home service' pattern as described earlier in this series. The only distinguishing features of their uniform at this period was the globe and laurel cap badge, in bronze, and naval web gaiters. Their equipment was of the 1908 pattern.

During the initial operations of the naval brigades they were dressed in typical sailor's fashion. The uniform proscribed being more or less that of naval landing parties. The short sailor's jacket, with white trimmed collar, and the trousers, covered at the ankle by gaiters, were blue; as was the cap. The equipment was made of blackened leather and consisted of a waistbelt with an open square buckle on each side of which were oblong, flapped, cartridge pouches. A bayonet was hung from the waistbelt and Y braces together with a bandolier and a waterbottle completed the field kit. After their withdrawal to England, the sailors were re-clad in khaki; these uniforms were basically of the army style but with several variations. Officer's rank was indicated on the shoulder straps in the military fashion as well as on the cuffs. These latter markings were true naval insignia consisting of khaki tape rings and curls. The RNR and RNVR officers had their own distinctive 'wavey' rings. Royal Marine officers wore army rank

*Named after the War Minister who introduced it some years previously.

badges. Officers of the RN Division wore naval caps with khaki cloth covers and they were unique in the fact that they were armed with an automatic pistol which was carried in a leather holster on the belt, to the left of the buckle. Petty Officers and other non-commissioned ranks wore red naval arm badges, as did most specialists and tradesmen.

The air forces were provided by three independent organisations, the Royal Flying Corps, the Royal Naval Air Service and the Royal Air Force. The RAF was formed in 1918 and was to absorb both the RFC and the RNAS.

The RFC were dressed in khaki. The tunic was double-breasted with a stand and fall collar, and had concealed buttons. It had a blue and white cloth title sewn to the point of the left shoulder, although this badge also seems to have been worn on the right, and it was popularly known as the 'maternity jacket'. Pilots' and observers' wings were worn on the left breast. Headdress was a forage cap but the field service cap was also worn. Trousers with puttees, together with black or brown boots, completed the dress. The equipment was of the 1908 pattern but since many airmen were armed only with a revolver and many others had duties which did not call for its use, it is seldom to be found in its entirety.

The flying dress was made of leather. The early issues were brown and consisted of heavy trousers and jacket, the latter with studded flaps on the skirts. The flying helmet had ear and neck flaps and a thick cord rim around the head. Goggles were made with a separate covering for each eye. The dress was completed with heavy, large gauntlets which reached almost to the elbow. A later flying suit, as used by the RAF, consisted of a black leather jacket which was double-



Above: A delightful period picture, vintage 1915 with a sergeant of the RFC nearest wearing a service cap rather than the forage cap more usually worn. RFC personnel with caps can be simply converted from the Airfix 1914 British infantry by cutting off all the equipment and modifying the tunic to 'maternity jacket' style with double front and no big pockets. RNAS rating stands on the left (Imperial War Museum).

breasted and closed by means of five buttons which ran in a line across the right chest. The helmet was shaped closer to the head and one-piece goggles were worn. On top of normal trousers were fur-lined hide leggings.

The Royal Naval Air Service wore blue naval uniforms, and ratings had a white topped sailor's cap. In 1914, working dress consisted of blue one-piece overalls and a naval cap. Ground crews later took to wearing a blue uniform consisting of a single-breasted tunic with lapels, closed by four buttons, trousers, and puttees. This was worn together with a white shirt and black tie, black boots and a blue, peaked, naval cap. At times, officers wore a khaki uniform similar to that worn by the RN Division but with golden cuff rank markings surmounted by a small gilded flying eagle.

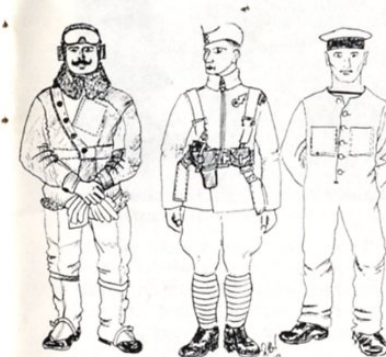
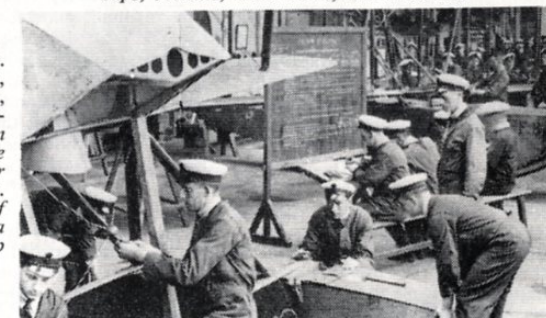
The RAF were basically clothed in army khaki dress, with peaked cap and puttees. Officers could wear a light blue uniform if they so desired but they did not do so generally until after the war. Rank was indicated by rings on the cuff for officers or by a red propeller.

A point to bear in mind is that many pilots serving with the RFC were only seconded from their parent unit. They continued to wear their own regimental uniform with flight qualification badges added. Some simple conversions of the types described are illustrated here.



Above: Three figures made from other Airfix types. Left: RN Brigade rating in fighting order, 1914, dressed as in picture on opposite page. Use Airfix American infantry trimming down tunic and removing tunic detail. Either use a complete head from the 1914 German stretcher bearers or make a new naval cap from a disc of card after removing the existing American campaign cap. For RN officer of Naval Brigade use Zoo Keeper figure torso on American infantry legs. Centre: RNAS mechanic made from American Civil War gunner with cap replaced by disc of card to depict round naval cap. Right: RFC pilot is basically a 1914 German. Plasticine is used to build up the shape and the helmet is cut down to flying helmet shape.

Below: RNAS mechanics in the later dress and wearing peaked caps, overalls, white shirts, and black ties.



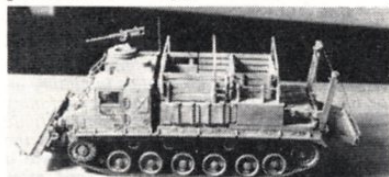
Left: Uniforms of the flying services. RAF/RFC pilot 1918 has brown helmet, black leather jacket with black buttons, brown gauntlets, and light brown leggings. The RFC Observer (centre) in marching order has khaki uniform, white lanyard and 'wings', brown leather holster and pouch and web equipment. He is a private. The RNAS mechanic of 1914 wears navy blue overalls over a sailor's white front and has a white cap cover.

NEW

KITS AND MODELS

NITTO M8A1

LATEST kit to come to us from the Nitto range of 1:35 scale AFVs is one of the finest we've yet seen in this scale, a superb replica of the US-built M8A1 Cargo Tractor which appears to be 100% accurate. In fact, the manufacturers seem so confident about it that they use close-up detail views of an actual vehicle to illustrate the instruction sheet! All the main constructional stages have the usual 'exploded' diagram with a picture of the real vehicle equivalent alongside. The M8A1 is used as a tractor for heavy AA guns and as a munitions carrier. Though it is not a well-known type, Nitto have really excelled themselves in modelling it. Every conceivable detail down to windscreen wipers is included and the model is a great pleasure to build. It is quite complex as well and took us longer to make than any previous Nitto kit. The highly detailed chassis and suspension alone represents about an evening's work and all the torsion bars are actually sprung. The suspension can be assembled for motorised running or non-motorised display, and optional sprockets and wheel hubs are provided accordingly. Even non-motorised,



however, the model is still sprung and free-running.

The 'wood' cargo body is nicely grained and there is a working dozer blade and a working loading tray, all with dummy 'hydraulic' action. Motorisation is the usual type from previous Nitto AFV kits which makes provision for just straight running with no other gimmicks. Two U11 batteries (not supplied) are needed for the power, and the usual type of rubber track is supplied—though one of them was missing from our review sample which we hope is an isolated case. In retrospect on previous Nitto kits we should say that Nitto's rubber tracks have perished fairly quickly in our experience compared with those offered by other Japanese manufacturers. Whether or not this is due to the British climate or an unusually hot summer we cannot guess but so far the judicious use of Bambi staples on the cracks has kept our earlier Nitto tanks running. This apart, the M8A1 is highly commended. The price is 55s and our sample came from Jones Bros of Chiswick who can supply, postage extra. C.O.E.

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Above: Colourful London United Tram is a card cut-out model (about 1:48 scale) simple but effective for transport enthusiasts. Price 2s from the Historic Commercial Vehicle Club, 1 Beaufort St, London SW3

AURORA SE 5A

THE Aurora range of nominally 1:48 scale kits of first world war aircraft is now available again in British shops. These kits were originally sold in this country some fifteen years ago. Unfortunately they have not been revised prior to re-issue and so still retain some of the characteristics of the early plastic kits. Chief amongst these is the practice of moulding national and individual insignia into the plastic. Fortunately this fault is easily rectified.

The review sample was for the SE 5. The scale of this proves to be 1:46 and not the 1:48 stated. It is a difficult kit to assess. It is referred to on the box as an SE 5 but in the instructions as SE 5A. One illustration in the instructions shows an undoubted Tiger Moth! Careful study shows the machine to depict a late production SE 5A and it has the blunt wing tips of that type. A major fault lies in the depth of the nose. This is far too shallow and whilst the radiator suggests that of the 200 HP Wolseley Viper engine, the depth is quite inadequate for that installation. This is a fault that must be rectified to produce an accurate model.

The transfers supplied are crude by current standards and the serial given, A4891, was that of an FE 8! Other markings show that this was supposed to have been B4891, which was an SE 5A flown by Major J. T. B. McCudden.

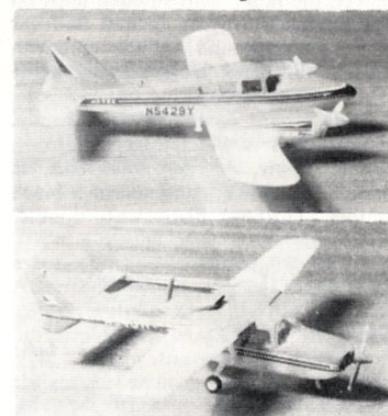
With the careful rectification of their faults (and the removal of embossed markings) most of the kits in this range can be made into quite nice models of the originals that they represent. Jones Bros of Chiswick supplied our sample, price 7s 6d. P.L.

NEW CATALOGUES

FROM Jones Bros of Chiswick we've had the latest catalogue by Riko, the firm which imports many ranges of Japanese kits (and other items) to Britain. Featured are kits by Tamiya, Fujimi, Midori, Nitto, Palmer, Jo-Han, and IMC. Also included is a list of main stockists and coverage of numerous slot-racing items sold under the Riko trademark. Price 1s post free, the catalogue can be had from Jones Bros. Latest Aurora catalogue comes from the same source at 2s 6d. Though in colour throughout, this must take the prize as the least informative catalogue we have yet seen. In only four instances could we find a scale quoted and the text is little more than a brief caption and a length in centimetres under each picture—with the caption frequently inaccurate! However, it does give a complete showing of the existing Aurora range including a few new items scheduled for future release. Of these the most interesting is the MBT-70 tank which is to join the admirable Aurora 1:48 scale range of AFVs. An 'Anzio Beach' in 1:87 scale is also scheduled which may or may not turn out to be of value to military modellers. C.O.E.

LIGHT AIRCRAFT

AURORA produce superb tank kits and very reasonable ship and car kits, but they've long lagged behind in the general quality of their aircraft even though they've sometimes shown an imaginative choice of



New Aurora 1:72 scale models of a Piper Aztec (top) and Cessna Skymaster.

subject. Three new kits which will be eagerly snapped by light aircraft fans show a considerable improvement on other recent Aurora aircraft kits and are well worth having. Light civil types in 1:72

Continued on page 294

AIRFIX magazine

MODELTOYS

PLASTIC KIT SPECIALISTS—ASSOCIATE MEMBER I.P.M.S.



AURORA KITS

S.H.H-3E "Jolly Green Giant" helicopter (illustrated)	1/72	15/-
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Lear Jet Commander	1/72	13/-
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Curtiss P-6E Hawk biplane	1/48	15/-
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X-18 Exp. Tilt-wing	1/70	15/-
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Bell AH-1G Helicopter	1/48	15/-
Albatross C-3	1/48	15/-
Halberstadt CL-2	1/48	15/-

MODELDECALS

Available only from Modeltoys

Please see separate advertisement on page 261 for details of two more releases in this successful range, one for the WWII period, the other for present day.

TAMIYA					
A6M3 Hamp Mod. 32	1/72	5/11	Beaufighter 1/6C/10	1/72	6/9
Ki-84 Hayate (Frank)	1/72	5/11	D. Havoc/Boston	1/72	6/9
Ki-44 Shoki (Tojo)	1/72	5/11	Martin Baltimore Mk. V	1/72	6/9
J7W1 Shinden canard	1/72	5/11	L.T.V. A-7A Corsair 2	1/72	8/6
J2M3 Raiden (Jack)	1/72	5/11	Phantom F-4K/M	1/72	8/6
			BAC Lightning 6	1/72	8/6
AOSIMA			F-100D Super Sabre	1/72	8/6
C6N1 Saiun (Myrt)	1/72	5/-	H.S. G.R. Mk. I Harrier	1/72	8/6
Ki-100	1/72	5/-	F-105D Thunderchief	1/72	8/6
Shiun (Norm) F'plane	1/72	5/-	G. A6A Intruder	1/72	10/6
			RA-5C Vigilante	1/72	15/-
IMC			Avro Shackleton MR-3	1/72	19/11
D.A4E Skyhawk	1/72	16/6	Kawanishi H8K2 Emily	1/72	32/6
Mig-21D (All Weather)	1/72	16/6	B.B-47E Stratojet	1/72	49/6
RF-4B Phantom	1/72	16/6			
HAWK			AIRFIX		
G.88F Bearcat	1/48	16/-	C-130K Hercules	1/72	19/-
Westland Lysander	1/48	16/-	SH-3D Sea King	1/72	5/6
			H.P. Jetstream	1/72	5/6
FROG *re-issued, new decals			Cessna 0-2	1/72	2/9
P-40B Tomahawk	1/72	3/6			
ME.Bf109F	1/72	3/6	MONOGRAM		
FW.190 short-nose*	1/72	3/6	P-51B Mustang	1/72	11/3
M.C.202 Folgore*	1/72	3/6	F8F Bearcat	1/72	11/3
P-47D Thunderbolt*	1/72	3/6	Curtiss P-36A	1/72	11/3
H. Sea Fury*	1/72	3/6	G.F7F-3 Tigercat	1/72	16/-
H. Typhoon Ib*	1/72	3/6	M.A.E. Bf110E	1/72	16/-
Spitfire XIV with VI	1/72	4/9	D.A.E. Skyraider	1/72	16/-
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Blackburn Skua	1/72	4/9	Helicopter team,	1/72	24/-
Blackburn Shark	1/72	4/9	2 kits together	1/72	24/-
P-38J/L Lightning	1/72	4/9	Dornier DO-17Z	1/72	24/-
F-86F Sabre	1/72	4/9	G.HU-16B Albatross	1/72	24/-
Fairley Gannet AS.1	1/72	4/9	P-51B Mustang	1/48	16/-
Bristol Beaufort II	1/72	4/9	P-47D Thunderbolt	1/48	24/-
Tupolev SB-2	1/72	6/9	Mosquito II/IV/VI	1/48	32/-
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			P-51D Mustang	1/32	32/-

ITALAEREI AIRCRAFT KITS 1/72

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Les Mureaux 117	1/72	8/11			
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Bloch 152	1/72	8/11			
Dewoitine D-520	1/72	8/11			
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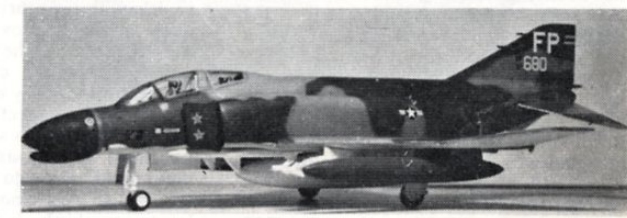
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MODELDECALS



Above: Airfix kit made up as Col. Robin Olds machine, using decals from Modeldecalsheet No. 2. Model by Richard L. Ward of Modeldecalsheet Nos 3, 4. One for another present-day aircraft, and one for the WWII period, see full details on page 261.

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New Kits — continued

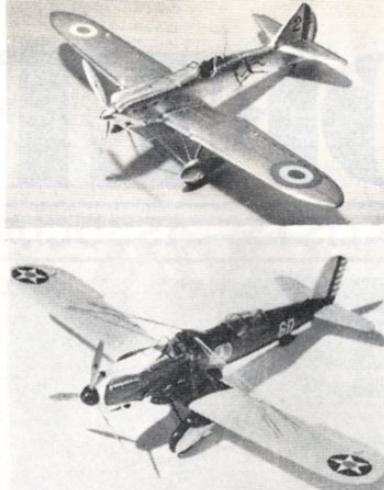
scale are very few and far between, but here we have a Piper Cherokee, a Cessna Skymaster, and a Piper Aztec C which are very well produced and very accurate, complete with detailed interiors. Surface detail is modest but accurate, rather in the Frog style, and assembly is very straightforward. Gone are the old embossed markings for long associated with Aurora and the transfers, too, are acceptable if not outstanding. All need considerable weighting in the nose to balance them on their undercarriages, needless to say, a point which should be mentioned in the instructions but isn't. Aurora have shown a colour picture of an actual aircraft on the box-lid of each kit, which is a good idea except that the transfers inside are for different aircraft entirely, with different colour schemes. Only in the case of the Cherokee was it possible to work out the colour scheme to match the markings supplied; in the others you are left guessing unless you can trace an illustration of the actual machine. This will not bother everyone, however, since there are plenty of civil colour schemes to choose from for each type. At 7s 6d each, postage extra, these are all kits worth having. The Skymaster makes a good contrast with its military counterpart, the 0-2 produced by Airfix.

By contrast with these newcomers, we also received one of the older Aurora kits, the Aero Commander, which has been available for some years. To an indifferent 1:80 scale, it is accurate in outline, but lacks an undercarriage and has the embossed marking positions of earlier days. It is priced at 5s but is not in the same league as the more recent offerings reviewed above. All these samples were supplied by Jones Bros of Chiswick who hold stocks. C.O.E.

TWO BY TAMIYA

MOST recent Tamiya tank kits to come to us for review are both good additions to the established 1:35 scale and 1:25 scale ranges respectively. In 1:25 scale comes a superb replica of a Soviet T-34/85 which is one of the most satisfying kits we've yet had the pleasure of making from the Tamiya stable. Together with Aurora's 1:48 scale M4A3 we would rate it as the best tank kit of 1969, at least from among those we received for review. Tamiya's T-34/85 reflects the inherent simplicity of its full-size prototype in its mode of construction which is so straightforward that it would make an admirable first choice for a beginner to this very large scale of AFV

Below: Tamiya's new 1:35 scale Panther



Above: Latest two releases in 1:72 scale from Rareplanes, 18 Hillford Place, Earlswood, Surrey, are the Dewoitine D-150 (10s 6d), and the Curtiss Shrike (11s 6d). Production is limited to 500 of each and they are nicely packaged complete with working drawings and instructions. They are for the more experienced modeller only and demand reasonable skill for completion.

model. The usual Tamiya 'steel' surface finish is provided, as are individual 'steel' colour shoes from which the track is assembled. Fully sprung suspension is offered, very ingeniously incorporated, and it really does give an authentic 'prototype' action as the model moves. The drive is to the front so the replica idler acts as the sprocket on the model though this is not apparent in any way. Ready-assembled gearbox is provided and the drive is restricted to forward/stop/reverse only, though presumably a remote-control version of the same model may be released later. In existing form, however, the model has a simple switch which fits inside the chassis; power comes from four SP2 batteries, not provided in the kit. Detail is just about 100% correct, and Tamiya appear to have used a captured Egyptian T-34 from the Israel Defence Museum as their actual model. With this in mind it would be desirable for modellers using any of the other five sets of markings supplied in the kit (four Soviet and one Polish) to check with pictures for detail fittings which could vary greatly from vehicle to vehicle. Also the model depicts a late production vehicle with twin turret vents, whereas the other markings provided might apply to early models with the single vent. The only tiny criticism we can offer otherwise, pointed out to us by a Russian interpreter, is a small imperfection in some of the Russian inscriptions supplied on the transfer sheet. We are assured however, that these faults might go unnoticed even by a Russian, so we are not complaining. Needless to say, this kit is highly commended at 79s 11d.

By contrast the 1:35 scale model, depicting the Panther Ausf A, falls short of Tamiya's best standards in our view, not as a model but simply in its mode of assembly. Maybe Tamiya have set too high a standard in the past, but in our sample we encountered for the first time motor screws

which didn't screw until 'assisted' by a hammer, and a hull top which fitted very sloppily indeed with just a small clip and two slots to hold it in place. What is needed here is a screw or plug type fitting as in the T-34. Small points these, but they mar an otherwise excellent kit. There is no suspension, just dummy torsion bars moulded to the chassis, and the battery holder and switch gear is very neat indeed. The tracks are superb, but unlike the T-34 they do not have the heavy 'sag' so characteristic of a Panther, a failing of all Panther models we've so far seen. The rest of the model is beautifully moulded and there is a wealth of detail, including opening hatches and a crew. We cannot fault the detailing, except perhaps for the absence of shackles on the front towing eyes, but these were not always fitted anyway. There is a selection of markings on the transfer sheet. Priced at 45s, both this and the T-34 were supplied to us by Jones Bros of Chiswick who hold stocks. Incidentally, we gave a brief review of the Panther some months ago, but this was an early made-up sample which we had on loan only. C.O.E.

RAILWAY PAINTS

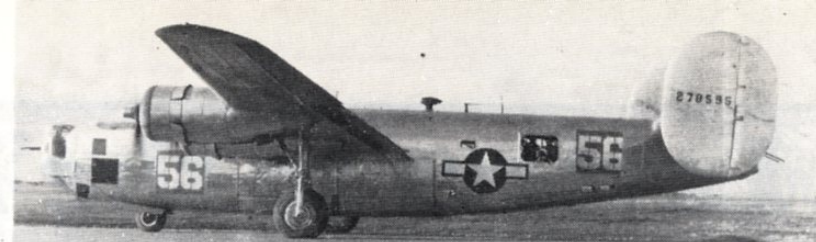
FOR many years our favourite paints have been those produced by Humbrol in their 'Authentic Railway Colours' range. These mostly have a semi-matt finish and make a far more realistic 'gloss' for models than the actual gloss paints on the model market. Paints sold as 'gloss' are generally too 'gloss' for very small models, even cars, and need considerable matting to be really effective. The Humbrol railway paints come semi-matt and are perfect straight from the tin. The whole range has now been revised with some little useful shades deleted and some useful new colours added. The paint formula has been improved as well and the price goes up to 1s 9d a tin, but is still superb value even so. All the shades are matched to railway company colours (or scenic colours in some cases) but most of them also match colours used on aircraft. For instance BR Freight Stock Grey matches Dark Sea Grey and SR Olive Green matches MAP Dark Green, so if you are an aircraft modeller wishing to paint up post-war jets in polished or polyurethane colours (the Harrier for example) you'll find these paints ideal for a splendidly realistic 'shiny' finish of a kind which cannot be matched so effectively by gloss paints or gloss varnish. Car modellers will find them equally useful. An up-to-date colour card, useful for reference, has now been produced by Humbrol and can be had free from Jones Bros of Chiswick if you send them a stamped self-addressed envelope at least 8 inches wide. This is a most handy item as the colour chips enable you to match the railway shades against the existing matt camouflage shades when seeking a semi-matt equivalent. Jones Bros, like most other large model shops, also stock the entire Humbrol range. C.O.E.

AIRFIX magazine

photoPAGE

More rare pictures from readers with captions by Michael J. F. Bowyer. A free Airfix kit is awarded for every picture published, but please note that there is usually a delay of some months before publication due to the limited space at our disposal.

Key: (1) B-24 Liberator 278595:56 in Italy, late 1944. Stripped from olive drab to natural metal except for area round code. Anyone know the unit? (2) Warwick ASR I BY234 of 293 Sqn. Colouring uncertain—possibly standard MEAF bomber scheme (I. Ramsden).



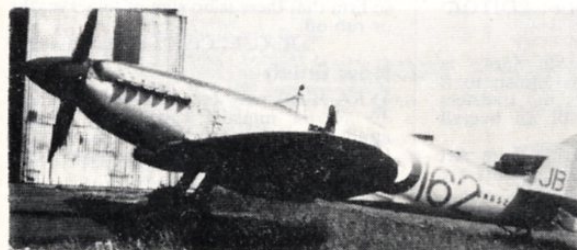
1



2



4



6



Key: (3) Walrus ZE-P:L2217 of 293 (ASR) Sqn, like the Warwick above also in Italy 1944 (I. Ramsden). (4) Seafire XV SW852:162 at RNAS Anthon in 1947 in extra dark sea grey and sky finish with pre-war style A Type roundels. (5) Tiger Moth BB684 of the Ferry Flight, RNAS Anthon, apparently yellow overall with A Type roundels in 1947 (both C. Cairns).

8



Key: (7) A fine view of a yellow/natural finish Fury trainer, K5677, in 1938. Crest on tail should enable identification of unit but we cannot place it. Does anyone know? (9) A supply dropping Dakota of 367 Sqn in Burma in 1944. In olive drab and neutral grey finish it has small SEAC roundels (not under wingtips) and carries no codes, nor is a serial visible in the usual position though this could possibly be obscured by the wingtip (both by M. Wellings).



9

Letters to the Editor

Avenger squadron

REGARDING my article on the Grumman Avenger which appeared in the November 1969 issue may I through your column apologise to Chris Buck for inadvertently miscrediting the photographs of the Avenger of the Royal Canadian Navy, 328.52826 to Bob Kopitzke.

This aircraft was in fact from 881 Squadron RCN and was photographed two days after the occasion of HM the Queen's Review of the Fleet in 1953. The colouring is unusual in that the RCN aircraft had the standard RN Dark Sea Grey upper surfaces but the undersides were not Sky but a very light grey, identical to that at present used by the RAF and known as Aircraft Grey, BS381C No 627. This is matched by Humbrol Railway Enamels BR Grey R136, the semi-gloss finish of this paint being correct for the period.

I am currently preparing a further drawing page/feature on the Fairey Swordfish for an early issue and would like to hear from anyone with any photographs or unusual finishes which might be considered for inclusion.

Robert C. Jones, 41 Brookvale Rd, Olton, Solihull

'Flower' class

HAVING read the article in the October Airfix magazine on 'Flower' class corvettes by Mr. A. Walton, I noticed that he did not mention that four 'Flower' class corvettes were captured by the Germans and three were placed in service with the German Navy. These vessels were among six building in French yards at the beginning of the war and were named *Arquebuse*, *Hallebarde*, *Sabre* and *Poignard*. After their capture they were numbered PA1 to 4 respectively and all except PA4 were launched in 1940 and completed in 1941. Their armament consisted of one 4.1 inch gun, three 37 mm (1x2+1x1) guns and ten 20 mm (2x4+2x1) guns. PA1, PA2 and PA3 were sunk by RAF aircraft on June 15, 1944, PA2 in the English Channel and the others at Le Havre; the uncompleted PA4 was launched on June 15, 1944, and expended as a block-ship at Le Telindière in April 1945.

Another interesting conversion possibility would be the German destroyer ZG3 which was built by Yarrow, Scotstoun for the Greek Navy and closely resembled the British 'H' Class. The *Vasilers Georgios*, as she was named, became the Italian *Hermes* in 1942 and was handed over to the German Navy in 1943; she was scuttled west of La Goulette on the German evacuation of Tunisia after receiving bomb damage.

R. P. Mitchesoy, Louth, Lincs.

Photopage points

INTEREST in the Airfix Ju 88-A4, which I've had for months but haven't yet made up, was rekindled by the Photopage picture of the Ju 188. The BMW 810 engines are clearly shown, so at this time

Letters to the Editor selected for publication entitle the senders to each receive a free Airfix plastic construction kit of their choice. We are always pleased to receive your comments and pictures, which will be considered for publication. Submitted material and pictures can only be returned if accompanied by a stamped addressed envelope, and the Editor cannot accept responsibility for safe keeping of any such contributions, neither does he necessarily agree with comments expressed by correspondents in the letters columns. Please note that any letters anticipating a reply MUST be accompanied by a SAE or stamp.

it was most likely the F1, although it could be the earlier E1. Some errors crept in the item below this, as the two Free French Spitfires are clearly XVI's (sixteens) not XIV's (fourteens) and the serial of the rear aircraft could not be TG902, as this was a Lincoln. TB902 was a Spitfire XVI, so could this be the correct serial? Unfortunately the photograph is too small as published to read the serial no.

The Valentia and Virginia photographs on the same page and also Bruce Robertson's article on the Virginia, were most interesting and I look forward to more like this.

Jack Meaden, Cheltenham, Clos.

Reference to the Spitfire XIV was a misprint for which we apologise—EDITOR.

Useful spray

I FIND that 'Reeves Ficsatif Spray' is ideal for giving that final finish to a model, it not only protects the transfers from peeling but dries with an overall matt finish.

The Aerosols are obtainable from Art Shops and costs 6s 9d. The contents are sufficient to protect several models.

Barry R. Clay, Tile Hill, Coventry.

Ship names

CONGRATULATIONS are, I believe, in order to Peter Hodges for his most comprehensive articles on naval vessels; having constructed two 'Battle' class destroyers from his previous work I look forward to adding some examples from the 'O-Z' classes.

However, in his references to the names bestowed on the 'lead ships' the impression is given that this was a practice instituted (insofar as concerns War Emergency Destroyers) with the 'S' and 'T' classes when, in fact, it was merely a continuation of an established practice.

For the record, and according to Manning and Walker's *British Warship Names*, Onslow was the Admiral Second-in-Command of the fleet at Camperdown, Pakenham commanded HMS *Invincible* at the Glorious First of June, Quilliam was First Lieutenant of HMS *Victory* at Trafalgar, and Rotherham commanded HMS *Royal Sovereign* at Trafalgar.

Unfortunately the last named was given a second and erroneous 'h' when he was remembered by the name of the 'R' class lead-ship.

G. M. O'Connell, Hull, Yorks.

Cryla colour

I THOUGHT it would be of interest to other modellers, to bring to their notice a range of colour paints, which seem absolutely perfect for all ranges in the plastic world.

They are obtainable from any artist shop and are marketed under the name of 'Rowney Cryla Colour'. There is absolutely no modeller who will not find these an absolute boon, whether he models, soldiers, tanks, aircraft or in any other sphere of the hobby.

Their beauty really is in the fact that they can be mixed with water and from the 29 colours available (including black and white) I can think of no colour which can ever be unobtainable. Also with the addition of three mediums which are available separately, one is able to obtain a gloss, matt or glaze finish.

I have experimented with them and find that a coat put on is completely dry in five to ten minutes which cuts down the waiting normally associated with a paint job. Used direct from the tube the colours tend to mark slightly from the brush, but with a slight water mix and the application of two coats the finish obtainable is something that I as a modelmaker of long standing have to admire, and so simple to obtain a good finish. Lastly after the 10 minutes before mentioned, one can place one's fingers all over them, and the adhesion is so firm that there is no sign of finger marks or rub off.

R. C. E. Cray, Sawston, Cambs.

New finish

READERS may be interested to know of an unusual camouflage scheme applied to Landrovers of 16 (County of Lincoln) Independent Parachute Coy TAVR.

The vehicles are finished in standard green overall but with large patches of an extremely dull red shade applied over body and tilt. There is no set pattern for this, the paint being applied at will. At least two, and possibly three Landrovers have been so treated but no other vehicles have been seen in this scheme.

T. J. Hudson, Lincoln.

Home moulding

I WAS interested to read Mr. Weaver's letter in the April 1969 issue. For some years now I have been using methyl methacrylate resin in model making. This is the acrylic plastic used in Dentistry and is available from any dental supplies company in small 'quick care' repair kit form. It consists of a polymer powder and a special liquid and is simplicity itself to use.

To make a plastic part for a custom built model, I first make it in bees-wax or paraffin wax and two-part, keyed moulds are made from it in Plaster of Paris. The wax is then boiled out and the plaster surface sealed with shellac. The plaster is then mixed and inserted as per directions and left to cure — a matter of minutes. Experience will gradually eliminate the production of excessive 'flash'.

Continued on page 298

AIRFIX magazine



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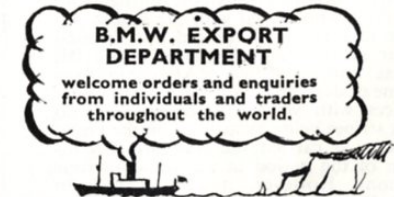
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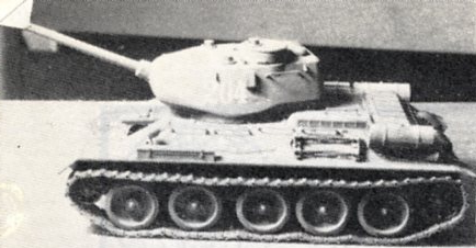
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Above: Tamiya's superb new T-34/85 model which is reviewed this month on page 294. It is to 1:25 scale.

Letters — continued

To duplicate a model part I usually take plaster impressions but one has to be careful here of undercuts in the part to be reproduced.

I have tried Plasticine as Mr Weaver suggests but find plaster much more accurate. It is an adaptable material and takes a high polish. Although the acrylic I use is pink it can be pigmented or painted.

I am sure that any readers wanting to find out more about this material and the technique of using it need only approach their local dentist.

K. Thompson, Fenham, Newcastle.

Sail treatment

MY SON John, has asked me to write to you. He was most interested in the Sailplan series by N. C. L. Hackney and has thought of a way to get different wind effects on sails. He has experimented and says he has found the method most satisfactory.

Method: you paint the sails—as given with the model—and when nearly dry wipe off excess paint, quickly take and heat over a warm fire. Then before the sail goes hard, bend into desired shape.

He hopes the idea will be of use to other modellers.

(Mrs.) Dorothy McIntyre, Cambridge.
A sample sent proved most convincing—EDITOR.

Rigging wires

I HAVE found a new way of making rigging wires for aircraft. The method is exactly the same as the heat-stretching sprue way, as illustrated on page 367 of the April 1969 issue except I use the plastic covering outside 2-core flex. This way is much easier, and it can be pulled to form exceedingly thin threads.

S. Brown, London SW2.

US Defiant

WHILE looking through the journal of an officer who served with the Eighth Air Force in England, I noticed this unusual colour scheme for a Defiant TT Mk III. It was finished in an RAF camouflage scheme of dark green and dark earth upper surfaces with yellow under surfaces, no black stripes being mentioned on the under surfaces. It carried the standard US insignia of the period in the standard four positions. However, it also carried an RAF B type roundel on the starboard upper wing and a C type roundel was carried on the port underside of the wings. A late war type RAF fin flash was carried on the fin. The codes, JW-V were in white. The colours of the serial, DR945 were not mentioned but I believe they were black. This airplane was seen in late June 1944

at the B-17 base at Rougham, Bury St Edmunds, Suffolk. This would make an interesting scheme for anyone converting the Airfix model.

David Isby, Jackson Heights, NY, USA.

Sopwith Pup

I WAS most interested in the Sopwith Pup conversion in your April issue. For sometime I have thought it possible to build a Pup from existing kits, but have never got around to attempting it.

There are, however, a number of points concerning markings and details. Most important of all, was the RNAS aircraft depicted the one which made the first deck landing on *HMS Furious* in August 1917? Photographs I have seen do not, unfortunately, show the aircraft's serial number. Beardmore-built Pup N6454 was certainly aboard *Furious* at sometime, and the general colour scheme appears identical. Assuming that this is the aircraft, a few points are worth mentioning.

Firstly, the elevators were striped as on the rudder (common RNAS practice). The roundels on the upper wing, in common with the others, had no white outlines and were rather farther inboard than on your drawing. Rope toggles were fitted under the fuselage and lower ailerons as in your drawing. The lower starboard aileron may have had its top painted white (to aid the deck party?) or it had been re-covered but not painted. One final detail: the windscreen was of the streamlined variety rather than being flat.

I hope these details may be of some use to readers attempting the conversion.

G. R. Inwood, Kings Stanley, Glos.

Metallic finish

I HAVE read of many ways of producing realistic metallic finishes in your 'Letters to the Editor' column and I have decided to reveal my secret formula. First of all I paint the aircraft with household 'aluminium' paint such as Vesta, as suggested in previous articles, and then I mix varying strengths of black or grey and apply these to the appropriate panels on the aircraft, using photographs for reference — I believe this idea has also been published before. But the next step is the secret: after applying transfers I spray the whole model with 'Letraset 101 fixative' (available in aerosol form). This results in a slightly deeper, metallic finish, it also makes the transfers 'blend' into the smooth surface. This can be left as it stands, or for a more realistic finish, water colours, with detergent added as a wetting agent, can be applied. I have used most commercial makes in weak concentrations using liberal doses around exhaust stacks, tailpipes, oil fillers etc. This coating tends to emphasize 'seams' and ailerons and flaps etc, as well as producing a pleasing 'weathered' look.

I have used a similar method on American aircraft painted in the camouflage scheme applied to various types of aircraft operating in SE Asia. When the 'Letraset fixative' is sprayed on, the colours become darker. In my opinion this is better than simply leaving the colours in the Humbrol set as they are. To flatten the semi-gloss finish I use black water colour as before.

After studying this camouflage scheme for some time (I live under the flightpath, and see a couple of USAF Phantoms, F-4Cs or F-4Ds, virtually every day, Monday to Friday) I consider it to be a

most authentic finish. The obvious drawback of this is that the water colours will easily rub off. This need not happen if the aircraft is handled by the leading and trailing edges of the wings. Dusting can be done using a fluffy brush. I have had some models for quite a while now and the finish is still 'as good as new'. One more point I'd like to mention is that it is easy to over-emphasize lines of rivets, as opposed to 'seams', this, I feel should be avoided, and with Vietnam-camouflaged aircraft especially, even coats of weak water colour should be applied, except around 'seams' and exhausts, etc. It is also a good idea to lightly rub with the fingers any markings such as roundels, etc, especially on aircraft with 'natural aluminium' finishes, as it is the 'metal' that varies in colour, not the markings.

It is also a simple matter to simulate the new gloss finish on many camouflaged RAF aircraft by spraying on the 'Letraset fixative' and simply leaving it as it is.

John Wilson, Castleford, Yorks.

Matt transfers

THERE has always been a difficulty in getting a painted matt finish to exactly match that of matt transfers, especially in letters like 'R' and 'P' where it is almost impossible to cut out the inside curves. I would therefore like to suggest the following method I have used on a paint conversion of the Defiant kit to a 264 Squadron aircraft.

I used Humbrol Authentic shades for the basic colour scheme. Then I applied a coat of Humbrol 49, matt varnish. This was followed by the transfers, a combination of Airfix and Almark letters and serials. This set-up was then finished off with a second coat of matt varnish.

I am delighted to report that there is no sign of unsightly, transfer background and the finish looks completely uniform.

James E. Wood, Market Rasen, Lincs.

Silver paper

MAY I offer some useful tips? They concern the use of the silver paper you get with any chocolate bar.

(1) When weighting some models with Plasticine in order that they stand on their nose, I noticed that some of them had a marked tendency to melt at the place where the Plasticine was set. Now I envelope the Plasticine in silver paper, which is entirely flexible to any shape, and my models don't suffer chemical reaction any more.

(2) The same aim was pursued with my AFV models; no more chemical reaction caused by the tracks to, say, tank wheels. I cover the inner surface of the track with plastic cement, applying then strips of silver paper. They can be painted quite normally.

C. Gerard, Brussels, Belgium.

REVISED PRICES

JONES Bros of Chiswick tell us that prices of the 'do-it-yourself' rail lengths reviewed in the last issue have been increased slightly. Nickel silver rail is now 15s per doz yards and brass is 10s per doz yards. This is due to increased metal prices. Due to the world nickel shortage, sale of nickel silver track is limited to personal callers at the shop only.

In our September issue we reviewed new Playcraft-Egger-bahn prices, and Playcraft tell us that the price of these has also been increased as follows: P12 Steam Tank Loco 52s 6d. P11 Diesel Works Loco 48s. P13 Articulated Steam Railcar 62s 6d. P22 Goods Van 6s 9d. P24 Proprietary Goods Van 10s 6d. P25 Dropside Goods Wagon 7s 6d. P26 Bogie Flat Wagon 10s 6d. P41 2nd/3rd Class Coach 10s. P42 Luggage Van 10s. P43 2nd/3rd Class Coach 10s 6d.

New Books — from page 283

is described and the actions it took part in are told in the words of those who flew them. Considerable research must have been necessary by the author to produce some of these examples and he is to be congratulated on making the text very readable and not just a list of prototypes and development history.

Each aircraft is illustrated by magnificent four view drawings by either Harold Jacks or John Young which by themselves will be of great use to the model maker. This is a book which once taken up cannot be left until it has been read from cover to cover.

Aviation 1914-18

BRITISH AVIATION: THE GREAT WAR AND THE ARMISTICE, by Harold Penrose. Published by Putnam & Co Ltd, 9 Bow Street, Covent Garden, London WC2. Price 105s.

THIS lavishly produced book is the latest volume in the well-known Putnam aviation series, which it follows in style and format. It continues where the same author's previous volume, subtitled *The Pioneer Years*, left off and covers the period 1914-19. For the serious aviation enthusiast interested in the period it is an invaluable study, for it really goes 'behind the scenes' and deals with the supply, construction, development, and design of military (and civil) aircraft of the period rather than the operational and combat aspect which has been recounted in numerous other publications. Unlike monographs on individual aircraft types which do, it is true, deal with many aspects of development, this book dovetails all the various work together to give a splendid overall picture of the war effort in Britain from the aviation point of view. It makes absorbing reading and runs to more than 600 pages with scores of rare pictures and factory drawings, most of which will be new to the average reader. Service training and organisation is also fully covered and enough on the actual air fighting is included to ensure that the reader does not lose touch with contemporary events on the Western Front and elsewhere.

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Military journal

MILITARY PANORAMA JOURNAL. Published by Feist Publications, 2827 7th St, Berkeley, Calif, USA. Price \$3.95. Available in UK from Bellona Publications, Hawthorn Hill, Bracknell, Berks. Price 35s plus 2s postage.

A NEW venture by Feist, this luxuriously produced 68 page publication is the first of a series of 'giant' magazine type books which is to be published periodically. The first issue deals with the 17 pdr gun fitted to the Sherman Firefly and development of British tanks with 17 pdrs generally. There is a fine article on the German Flak '88' gun with superb pictures and drawings, another article on German Tank destroyers, 1934-44, and another on the secondary armament in the StuG III. The aircraft side is covered by a detailed history of the FW 190 and an article (by M. J. F. Bowyer) deals with American fighters in British service, 1940-45.

FROM Bellona we've had a sample of the latest revised edition of *Armoured Vehicles*, the booklet compiled by George Bradford of MAFVA. This small but interesting publication contains hundreds of drawings presented chronologically year by year and covering AFVs up to the present time. Price 8s plus 1s postage.

M4A3 — from page 269

This completes the model which is quite an extensive and lengthy conversion and makes a big contrast with the early M4 depicted in the basic kit. I would think that reference to the Sherman Profile will be essential for the many detail points needed on this M4A3 model and in particular the drawing in the Profile is very useful. Of course, if you have a Minitanks M40 spare you can use the chassis in the normal way and forget about altering the Airfix suspension as I've described. This would speed up the conversion.

'Military Modelling' by Chris Ellis is held over this month due to lack of space, though Charles Kliment's and G. W. Futter's articles give military fans plenty to do. Chris Ellis's models intended for this month will be added to next month's article.

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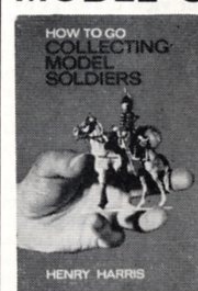


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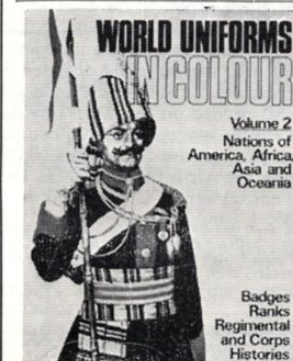
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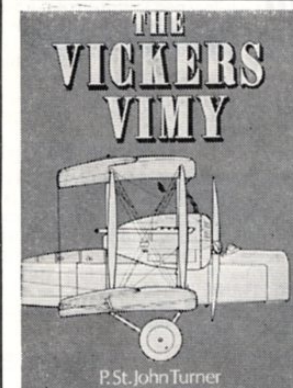
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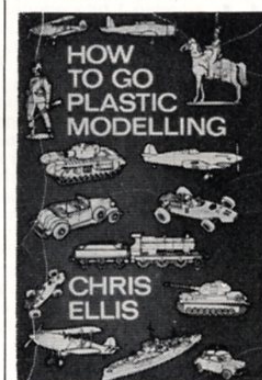
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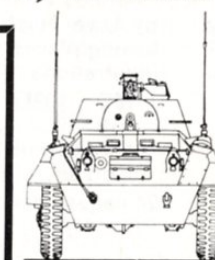
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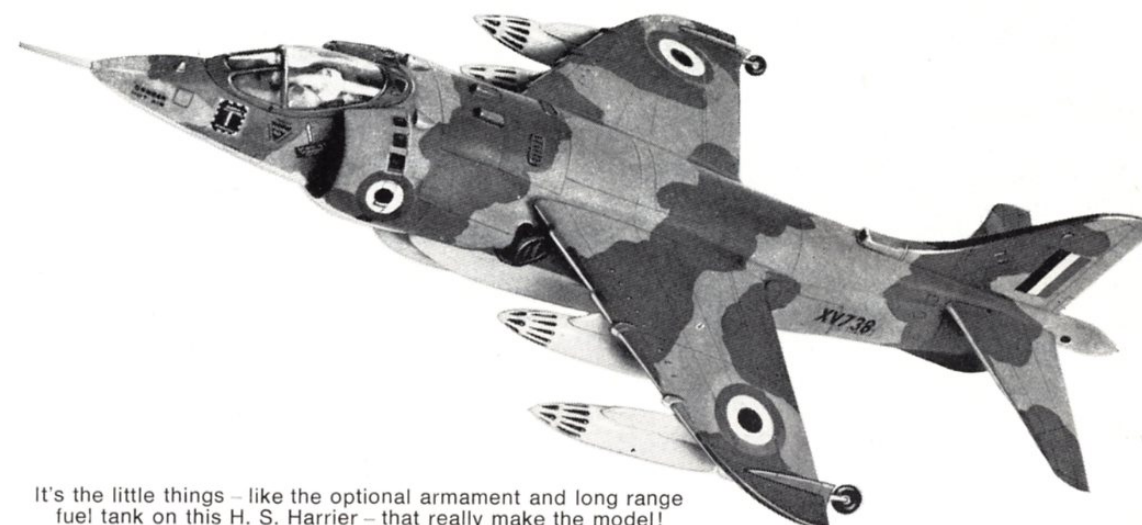
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